The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 268.---Vol. X.] LONDON: SATURDAY, OCTOBER 10, 1840. [Price 6d.

PROCEEDINGS OF PUBLIC COMPANIES.

TRELEIGH CONSOLIDATED MINING COMPANY.

The half-yearly general meeting of the shareholders of this company was held at the office, 23, Threadneedle-street, on Wednesday, 7th inst.

John Heyman, Esq., in the chair.

The advertisement convening the meeting having been read, the minutes of the last meeting were confirmed. The reports and financial statements were submitted, and also the following report from Captain Sincock, dated the 3d of October:—

As I presume this day's report will appear at the general meeting, on Wednesday next, I have thought you would require some explanation as to the extent of excavations, &c., made in the past year, to the end of August last, which are as under, viz.:—Sinking shafts 22 fms. 3 ft., winzes 31½ fms., driving cross-cuts 15 fms., and opening levels on the lode 280 fms. Though I am sorry our levels at this moment are not so good as they have been, yet I have no doubt they will again improve. The lode in the shaft going down never looked so well, it is hard, 2 ft. 6 in. wide, and worth 12*l.* per fathom in sinking; and the sixty fathom level west is improving, being three feet wide, worth 6*l.* per fathom; the ore is of superior quality, and I have no doubt this level will open into a new bunch of ore, west of the flucan. The upper levels are poor, but not unkindly to those acquainted with their component parts. The pitches are also holding their own, in fact, rather improved from last month, which I have no doubt will give us 100 tons of ore. We are looking more promising, at Good Fortune particularly, as we have seen Shanger lode in depth and extent west, under a change of country, and soft lode seen in the adit. The twenty fathom level looks well; the lode four feet wide, with a good leader of ore on the south part, and stones of ore throughout, worth from 3*l.* to 4*l.* per fathom, leaving tribute ground.

The reports and accounts were unanimously adopted, and, after some general conversation, the following resolution, having been duly moved and seconded, was passed:—"That Mr. Oakey be requested to act as auditor of the company, in the room of Mr. Simpson, deceased." It was also agreed that, in future, the general meeting of this company be annually, and not half-yearly, as heretofore.

The thanks of the meeting were voted to the chairman and directors, and the meeting adjourned.

WEST LONDON RAILWAY.

The adjourned half yearly meeting of this company, better known as the Birmingham, Bristol, and Thames Junction Company (the name being altered under the authority of an Act passed last session), was held on Wednesday, the 7th instant, at the offices of the company, Abchurch-lane. William Morgan, Esq., in the chair.

[A notice of the former meeting, which was held at the same place, appeared in the *Mining Journal* of the 12th ult.]

The Chairman having briefly opened the proceedings, by referring to the unavoidable absence of Sir John Scott Lillie (chairman of the board), who would have presided *ex-officio*, the Secretary (John Thompson, Esq.) read the report of the directors.

REPORT.

The report alluded to the recent appointment of Mr. Robert Stephenson, as engineer of the company, in the room of Mr. Hosking, who had resigned, and stated that the report of the former gentleman, upon the present condition of the works, and the best means of carrying out the undertaking, was not yet ready, although the present meeting had been called principally to receive it. It was now proposed to make two extensions of the line—the one to the Thames (the original line stopping short of the river by about a mile and a half), and the other to Knightsbridge. It was proposed that the extensions should be undertaken by a separate company, and a provisional committee had already been formed. So important were these extensions to the original undertaking, that the directors had determined to take means for combining them with the existing line. The report then adverted, at considerable length, to the means recommended for raising the further capital required. The following is the substance of the proposals, which were, of course, drawn up with due regard to forms and technicalities:—A sum of 60,000*l.* is required to complete the present line, as sanctioned by Parliament, and the directors propose to raise that amount by the issue of 6000 shares, upon which 10*l.* each will be called for, the shares, nevertheless, being considered 20*l.* shares—in other words, the new shares are to be issued at a discount of 10*l.* per share. This 10*l.* is to be called for by instalments (generally of 1*l.*), the last payment becoming due on the 1st of May, 1842. Up to that date, the holders will receive interest at the rate of 5*l.* per cent. per annum upon whatever amounts may be actually paid up; and, subsequently, they will be entitled to a dividend of 1*l.* per share per annum, out of the profits of the line, this dividend being paid preferently to any dividend upon the old or original shares. The latter (which are 20*l.* shares, issued at par, and all paid up) are then to receive a similar dividend, and the surplus profits (if any) are, when the latter sum is paid, to be equally divided among the new and old shares, both being considered of the same value, namely—20*l.* Should the profits of any one year not suffice to pay the preference dividend, the balance is to be paid out of the profits of the next or any following year. So much for the amount necessary to complete the Parliamentary line. With respect to the proposed extensions, the directors calculate that 140,000*l.* will be sufficient to accomplish both of them, and this sum they propose to raise by 20*l.* shares, the whole 20*l.* to be called up, and the holders to have preference dividends of 1*l.*, in the same manner as the new shares above referred to. In order to connect the extensions with the original worth, no shareholder is to be allowed to take up the new preference shares in the existing company, without taking up, at the same time, shares in the extension company, in the proportion of five of the former to seven of the latter. Both companies are to be amalgamated when the several works are completed, or as soon after the extension company have obtained an Act of Incorporation as the proprietors of the two bodies may consider fit.

Lord Kensington moved the adoption of the report, which was seconded by Mr. Godwin, jun., and carried unanimously.

Mr. Duncan (the solicitor to the company) then read a long series of resolutions, embracing the regulations above described, in respect of the shares to be issued; and explained, that although the terms might be considered hard upon the holders of the original shares, it was the only feasible plan for completing the work, and for securing the extensions, upon which the success of the undertaking mainly depended. Mr. Stephenson (upon whom Mr. Duncan passed a high eulogium) strongly recommended the extensions. The learned gentleman concluded by moving the adoption of the resolutions.

Lord Kensington seconded the proposition, and expressed, in a very energetic speech, his conviction of the important advantages which would result to the company from the extension to Knightsbridge. He was, he said, a large shareholder in the existing company, and was prepared to subscribe 5000*l.* towards the extensions. He thought the proprietors might manage to keep the extension shares among themselves, but if not, he was sure the public would readily take them up, when they knew that the scheme was sanctioned by so high an authority as Mr. Stephenson.—The motion was then carried unanimously.—It was stated that little opposition was anticipated from landowners on the extension lines.

In answer to a variety of questions, it was explained, that the amount of arrears due upon calls was 14,437*l.* Of this amount 5019*l.* was decidedly a bad debt, but a great portion of the remainder would be recovered, and actions at law were now proceeding against some of the defaulters, others having received time in which to pay their several amounts. Since the last general meeting, a considerable sum, which had been considered "bad," had been paid up. Certain shares, amounting in number to 969, had been declared forfeited, and would soon come before the proprietors for confirmation.

On the motion of Mr. John Britton, seconded by Mr. Crawford, the meeting was again adjourned to the 14th of next month, to receive Mr. Stephenson's report.

A vote of thanks was then unanimously passed to the chairman, who briefly, but appropriately, made his acknowledgments, and the meeting separated.

CHESTER AND BIRKENHEAD RAILWAY.

The half-yearly meeting of the proprietors of this company was held in the Clarendon-rooms, Liverpool, on Friday, the 2d inst.

Mr. Forsbery in the chair.

The Secretary read the report, which referred to the recent opening of the line, and the very satisfactory state of the works. The company were well supplied with engines and carriages to meet the increasing traffic which might be expected on the opening of the Chester and Crewe

line, and although it would be premature to enter into calculations as to its character or amount, the directors were led to anticipate the most profitable results. He afterwards read a statement of the receipts and disbursements up to the 31st of August. The total amount received up to the 29th of February was 308,276*l.* 11s. 2d. By total disbursements to that date, 298,965*l.* 10s. 10d.; which made the balance in hand at that date, 9311*l.* 0s. 4d. The amount received on calls, loan, interest, &c., from February 29th to August 31st, was 111,497*l.* 3s. 11d. The expenditure from February 29th to August 31st, was 89,078*l.* 18s. Balance in banker's hands, 22,398*l.* 6s. 5d.; ditto in treasurer's hands, 19*l.* 19s. 6d. The report gave much satisfaction, and was unanimously adopted. The secretary read an account of the daily traffic since the opening of the line, from which it appeared that the total number of passengers carried was 2408, and the total receipts, 318*l.* 16s. 9d.

A discussion then took place relative to a reduction of the fares, but as the concern was yet in its infancy, it was the opinion of the meeting that it would not be advisable to make any alteration in the scale of charges at present. It was stated that a purchase had been made of Monk's Ferry for 25,000*l.*, and that the company also held in fee-simple the lease of Wooduide Ferry, the receipts of which had very considerably increased, and was now paying a very handsome per centage. Instead of dividing 650*l.* annually amongst the board (the existing mode of remuneration), it was resolved, in future, to pay the directors a guinea for each attendance at the board meetings.—Thanks having been voted to the chairman, the meeting separated.

DURHAM AND SUNDERLAND RAILWAY.

The half-yearly meeting of this company was held in the Arcade Room, Sunderland, on Tuesday, 29th ult., and was very numerously attended.

CALEB WILSON, Esq., in the chair.

The report was read by Mr. Tiplady, from which it appeared that the receipts of the company for the last six months exceeded those of the corresponding six months of last year by nearly 4000*l.*, with the prospect of a continued increase. The revenue, however, is still inadequate to meet the expenses, and pay the shareholders interest for their outlay, and some discussion arose as to the best means of increasing the company's income. It was finally resolved to appoint a committee to endeavour to procure a reduction of the way-leaves paid to the landowners, and an increase on the tolls for conveying coals. It was also resolved that the shareholders be requested to advance 10*l.* per share, on which 7½ per cent. would be paid, for the purpose of paying off a debt of 80,000*l.* due to the bankers. The appointment of clerk to the company, in the room of the late Mr. Gregson, was deferred to that day month.

SPECIFICATIONS OF RECENT PATENTS.

(From the "Inventors' Advocate.")

Thomas Craddock, Broadheath, near Prestelgn, Radnor, a certain improvement or improvements in steam-engines and steam-boilers, Sept. 16.—The improvements in steam-engines consist, first, in an improved mode of obtaining a rotary motion from the rectilinear and reciprocating motion of the piston rod; and, second, in an improved method of condensing steam.

The improvements in boilers consist in an improved construction of boiler, and in an improved method of regulating the generation of steam.

First claim is to the mechanical arrangement of the apparatus delineated and described, whether employed for converting the rectilinear into the rotary motion, or the rotary motion into the rectilinear. In this improvement, the piston rod carries two toothed racks, one being behind, on one side of the other; one of these toothed racks works into a pinion, which pinion takes into the teeth of a drum, which is firmly keyed on the main shaft, which drum has teeth over half its circumference on one side, and over the remaining half of its circumference on the other side. The mode of working is as follows:—By the up-stroke of the piston rod, the pinion, taking into the teeth on one side of the drum, brings it half round, and is released; then, by the returning stroke of the piston rod, the other rack takes into the teeth on the other side of the drum, and finishes the stroke in the same direction.

Second claim is to the exclusive right of condensing the steam or vapour of water, or other liquids, by causing it to pass into metallic tubes, of small diameter, or into metallic vessels of any other suitable figure; which tubes or vessels are put in motion, either rotative or otherwise, either in air or water, independently of any motion of the carriage, boat, or vessel, to which the condenser may be attached, whereby the condensation of the steam or vapour is greatly accelerated. This condenser is composed of two chambers, connected by a bar, and supported by hollow axes revolving in bearings, which axes are connected, the one with the eduction pipe of the engine, the other with a hot well, or reservoir. From each chamber a number of hollow arms diverge, which are connected together by a series of rings; the two sets of rings are likewise connected together by small tubes, reaching across several times. The condensing is performed as follows:—The steam, after operating on the piston, is introduced through the chamber into the tubes; the condenser is then caused, by bearings from the engine, to revolve with great rapidity, by which means the caloric is abstracted and the steam condensed, the water resulting from which is conveyed from the other chamber, into which it flows through a pipe into the hot well, from whence it is drawn by the feed pump into the boiler.

Third claim.—The construction and arrangement of the parts constituting the boiler.

Fourth.—The use of a separate cylinder to supply both air and fuel to the furnaces, and regulating the supply of steam to the cylinder by the pressure of steam in the boiler, in such a manner that, as the pressure increases, the supply of steam to the cylinder is diminished, thereby diminishing the supply of air and fuel to the furnace. The boiler is composed of two furnaces, the sides of which are formed of ranges of hollow tubes, which are full of water, communicating at the top and bottom with rectangular reservoirs; the bottom is formed of smaller tubes, extending horizontally from one reservoir to the other, and acting as fire-bars; the top is likewise composed of tubes extending from one reservoir to the other; the ash-pit is a tank filled with water, which, by the heat from the fire-bars, evaporates, and passing up a tube into the condenser, is there condensed, thereby supplying any loss from leakage. The fuel is conveyed into the furnaces by shoots from two hoppers; upon being thrown into the hopper, it falls upon two fluted rollers, which are worked by the pinion that drives the fan, it then falls through or between these rollers, and down the shoot upon a swinging plate, which scatters it over the surface of the fire. The wind passes from the fan through a pipe to the bottom of the fire-bars. When the steam gets beyond the regular working pressure, it shuts the valve which supplies the fan cylinder with steam, and escapes through another opening into the atmosphere, whereby the pinion that works the fan is either stopped, or works very slowly, by which means the supply of air and fuel to the furnaces is very much decreased or cut off altogether; when the steam has returned to the regular working pressure, it is again admitted to the fan cylinder, which we ha as before. There is a suitable opening, provided with a cover, for the admission of the fire, and likewise a tube with an eye-piece of tale for viewing the fire when required. There is likewise a contrivance for burning the smoke arising from the coals when newly thrown on the fire; it operates in this manner; there is a tube which communicates with the two shoots, and at the bottom of each furnace there is a valve for shutting off the supply of air; when one or both of the furnaces have burnt bright, and fresh fuel is required, the supply of fuel and air is shut off from the other one; the smoke arising from the fresh fuel is driven, by the force of the air from the fan, through the flue into the other furnace, where it passes through the fire, and is consumed.

Jean Francois Victor Fabien, King William-street, London, improvements in rotary engines, which may be worked by steam or other fluids, Sept. 16.—This invention is a new high pressure rotary steam-engine, working expansively, and giving the shaft a direct motion.

The engine is composed of a horizontal cylinder, having the eduction and exhaustion pipes cast with it. On the shaft revolving in the cylinder is keyed the piston, being a cylindrical boss, having two diametrical plates, whose surfaces are curved so as to allow a perfect contact with the slide, which is the fulcrum of the steam working expansively here. The piston is within two vertical plates, having their circumference provided with circular curved segments, concentric with the piston, having for their radius that of the cylinder; their internal surfaces, which are not occupied by the piston, rub against the lateral slide segments of rectangular section, rubbing against the internal surfaces of the two plates. The slide is put in motion by two transverse rollers, revolving in a lever, affixed to the shaft at each side of the engine, and working in a curve, calculated to cause the slidees to follow the piston in all its positions by their alternate horizontal motion. The circular plate, which accompanies the piston in all its positions, rubs against the surface, by which disposition it nullifies any communication of steam between its eduction and exhaustion, till it has produced its effect. The admission of steam is regulated by two conical valves of a peculiar curve, acting in a frame and catch that opens and shuts the eduction of steam by a conical valve, when it is put in motion by a disengaging lever, by which the engine may be stopped when required.

Thomas Vassel Grant, Her Majesty's Victualling Yard, Gosport, Southampton, improvements in fuel, Sept. 16.—Consist in a combination of small coal with coal tar, or other bituminous matter, which, being heated, is reduced to the substance of hot pitch, two gallons, or 20 lbs. of which is combined with every hundred weight of coal dust, and the material moulded like bricks.

ROYAL CORNWALL POLYTECHNIC SOCIETY.

The eighth annual meeting of this society was commenced on Tuesday week, at the Polytechnic Hall, Falmouth.

Sir CHARLES LEMON, Bart., M.P. (President), in the chair.

The PRESIDENT, after making some general allusions to the successful endeavours of the friends of the society, and congratulating them on there appearing no symptoms of declining energy on the part of those who exhibit, or of abated interest in those who attend as visitors, referred to the great loss the society had sustained in the death of their late president (Davies Gilbert)—paying a feeling tribute to the memory of that most excellent man—commented on the various objects composing the exhibition, and said there were two or three exceedingly ingenious contrivances to which he wished particularly to call attention, and that publicity should be given in every possible way. I allude, at first (said Sir Charles) to the exceedingly ingenious contrivance of Mr. Hosking. You are aware that the great object in many of our mines is to combine as many operations as possible in the action of one steam-engine; but, at the same time, many of those operations are worked out by opposite action—that is to say, in the drawing of ores from shafts it is necessary repeatedly to reverse the action in raising or lowering the buckets. When that new engine is connected with other mines, and directed to other purposes requiring a continuous action in the same direction, injury has perpetually occurred to the engine, which it has been the object of Mr. Hosking, in that engine, entirely to overcome. In that engine itself—if any one will turn the handle—he will see that, with regard to the stamps, the action is continuous always in the same degree. It is brought about by a contrivance of the greatest merit. It is one of the most ingenious, the most simple, and at the same time one of the most extensive applications that I am aware of. There is another engine which is very practicable and universal in its application; it is a new kind of plunger, the object of which is to obviate the necessity of the entire removal of the pumping-engines of the mines, for the sake of restoring the packing. This is now done by removing a small part of the exterior. There is an object of Mr. Fox's, which is well worthy your attention. A prize was offered the year before last for a mode to prevent the corrosion of boilers by the chemical action of the water to which they are exposed. Mr. Fox appears to have overcome that, and that is easily seen by looking at the plates of iron there in the liquid. There is, on another part of the table, a specimen of a wire rope, sent from the Hartz, by Mr. Basset. He has sent an explanation of the way in which it is used in raising and lowering miners, and other purposes. The rope appears now exceedingly stiff and inflexible; but he says it twists round the axle of the wheels just as easily as any hemp or twine. Together with that he has sent a lamp, such as they use, which I think may be used in our mines, and obviate much of the expense of candles. There is another invention of Mr. Fox, which is that of the long pipe, for the purpose of exhausting the ends of levels of foul air, where there is no current. He has contrived, by this very simple apparatus, to pump it out altogether. After referring to other portions of the exhibition, Sir Charles said—There is one part of the exhibition to which, perhaps, I attach more consequence than I ought to do; but, at the same time, if I am guilty of a little egotism, I hope you will excuse it. I allude to the exhibition by the boys at the Mining School. There are several plans and isometrical drawings which I think are highly creditable to the boys who did them. There are two plans, by Cady and Tredinnick, to which I may with some propriety allude, because they are particularly worthy of your attention. There is also an isometric drawing by Powell. The use of isometric drawing is this: there is a drawing of a waggon on the tramroad; any mechanic having that before him has the whole series of working drawings, and can produce an engine of that kind, perfect in all its parts, by simple measurement.

Lieut. JAGO, R.N., read the prizes awarded by the judges, among which was one to Mr. J. Trevelyan, for a plan for raising miners; to Mr. J. Holman, for an improved plan of patching boilers; to Mr. Quintral, for an improved lifting pump for mines.

The PRESIDENT said, the British Association would meet next year at Plymouth and Devonport, and the probability was, that many of those who came to Plymouth and Devonport would come on down here. He hoped, therefore, they should have as good an exhibition as possible. He said this with a view to the credit of the county. The hon. Baronet then said that he had put into his hand a letter from Mr. Basset, giving an explanation of the things on the table—the lamp and the iron wire rope. He then read great portions of Mr. Basset's letter, which spoke of several improvements in mining operations, founded on the practice of mining in the Hartz mountains. First, as to ascending and descending machines, there were three different sorts. The last was constructed entirely of *fil de fer*, or iron wire rope, invented by the inspector of Claushall, originally for raising the buckets. Mr. Basset spoke of having communicated with several mining inspectors in Germany, by most of whom the *fil de fer* appears to be approved. The *fil de fer* exhibited contained twelve wires; but as used in the shaft at Andreasburgh, the ropes are of various thickness, from twelve to seventy-two wires, according to the varying weight, at different heights. The expense of the twelve-wire rope was about 3d. per foot. No opinion of the practicability of the rope could be formed from the short specimen exhibited—but Mr. Basset had seen it coiled round as the wheel revolved with the regularity and ease of twine.—We could scarcely render intelligible, within our limits for such matters, the details given by Mr. Basset of the various plans adopted for raising and lowering miners. This is, however, the less necessary, from the fact that no decided opinion appears to be formed on the merit of the plans, except as to the use of the iron wire rope.

The PRESIDENT proposed the thanks of the meeting to Mr. Basset for his communication.—The hon. Baronet then said that they had a very valuable essay with respect to the air of mines—an abstract of which Dr. Winn would be so kind as to read.

Dr. WINN said, the few observations that he had to make, related to a paper by Mr. Matthew Moyle, of Helston, on the chemical analysis of air in mines, to which the judges had awarded the first premium offered by Mr. Charles Fox for the best essay on that subject. He would not occupy their time with remarks on the first part of the paper, which was purely elementary, but proceed to direct attention to the results of no less than eighteen experiments on separate portions of air taken from deep-seated levels in various mines. Six samples of the air experimented upon were taken from tin mines in slate shortly after blasting; three from copper mines in granite; one from a copper mine in slate; four from tin and copper mines in granite; two from levels where no gunpowder had been used; and two from mines the characters of which had not been ascertained. In each case carbonic acid was found to predominate to a fearful extent, especially where gunpowder had been recently used. Strong traces of sulphuretted hydrogen and sulphuric acid were found in many instances. In one case Mr. Moyle succeeded in measuring an 80-1000th part of sulphuretted hydrogen. The summary of these experiments showed—

The average quantity of oxygen.....		17·067
Ditto	ditto	carbonic acid .. 0·085
Ditto	ditto	nitrogen ..... 82·848

Dr. Winn concluded, by saying, when we consider the delicacy, skill, and industry required for investigations of this nature, and the importance of the fact elucidated, the thanks of the public appear to be particularly due to Mr. Fox for having instituted inquiries of this kind, and to Mr. Moyle for having so ably fulfilled the requisitions of the premium.

Longevity of Miners.—The PRESIDENT said, in very close connection with the subject just described by Dr. Winn, were some statistical inquiries of Mr. Rice, of Redruth. The two subjects stood in the relation of cause and effect—Mr. Rice had been following out his investigations, and he had now some new matter to lay before the meeting.

Mr. RICE announced to the meeting the results of his inquiries respecting the comparative longevity of our Cornish miners. In a paper published by the society, in their last report but one, he stated that the occupation of the miner shortened his life by at least twenty years; and he came to that opinion by comparing the longevity of persons residing in different Cornish districts, from which it appeared that a difference of twenty years existed in the ages of those dying in the mining and agricultural districts. Since then a new mode of registration of deaths had been adopted, and, as he had stated in a letter to Dr. Barham, they were now able to substitute knowledge for opinion. Within the last few days he had had an opportunity of examining the first volume of registration of deaths in Camborne and Illegan. The average age of those miners who died in Illegan was forty-nine, and of those not miners sixty-eight—making a difference of nineteen years. In Camborne the longevity of the miner was fifty-four years, whilst that of the man not employed in mines was sixty—showing only a difference of six years. On this he should have to remark presently. The average of Gwennap was, of the miner, forty-six years, and of the non miner sixty years—exhibiting a difference of fourteen years. But there was one other important fact, and to that he begged to direct the attention of the philanthropist. A mean per centage of seventeen of their mining population came to violent deaths in consequence of their employment. In Gwennap the deaths were one-sixth, but in Illegan he found it increase to 33 per cent—so that it appeared that of the miners buried in Illegan, one third had been the subjects of coroners' inquests. It behoved every well-wisher of his species to exert himself in every possible way for the amelioration of the condition of the miners. He wished to call attention to the apparent superior longevity of the miner in Camborne—but it was not so great as it appeared. Many persons registered in that parish had been described as "surface miners," whom it had been thought necessary to class with miners in general. In the other parishes where the persons supposed to be meant by the term "surface miners" were designated as "ore dressers," "engine men," or "mine agents"—they had not been reckoned as miners. Allusion was made to this circumstance particularly, for the purpose of suggesting the propriety of some fixed rule of classification, in cases where persons of very advanced age were described as miners, as some, for instance, at Camborne, were so described who had attained the ages of eighty-four, eighty, and upwards of seventy, at which time it would be impossible for them to work underground. If it was desirable that they should be classed as miners, it should be stated at what time they ceased to be underground miners; because, in many cases of incipient disease or accident, men ceased to work underground at very early ages, although, being still employed in the mines, they would continue to be classed as miners. The causes of these accidents had been, principally, falling from the ladders, and premature explosions—facts which made it highly desirable that efforts should still be made for some safe mode for miners to ascend and descend. Mr. Rice, in conclusion, said he offered these facts in continuation of former communications on the same subject, from a persuasion that a people so philanthropically disposed as the Cornish had generally been to lessen the sufferings and ameliorate the general condition of their fellow-creatures in other parts of the world, need only be informed of the vast amount of suffering endured by a large proportion of the population of their own county—of the great sacrifice of life which the present modes of working the chief source of Cornish wealth involved, to induce them to endeavour to abate the evil by their support of polytechnic societies, mining schools, and all institutions whose object was to impart knowledge, and, by their encouragement of scientific effort, to make knowledge available for the benefit of their unfortunate neighbours.

The PRESIDENT recommended that there should be a division into classes, under two different heads—those who work on the surface, and those who work below. All who had to do with mines would render a service to the county by turning their attention to this subject.—The thanks of the meeting were then accorded to Mr. Rice for his valuable paper.

The dinner took place at Pearce's Hotel—the chair was taken by the president, Sir Charles Lemon, who was supported on his right by Sir W. Molesworth, the Revs. G. Treweeke, W. Molesworth, T. Philpotts, and Dr. Barber; and on his left by J. Buller, Esq., of Morval, J. H. Tremayne, J. D. Gilbert, and R. Taylor, Esqrs., &c.

The usual loyal and patriotic toasts having been duly honoured, Mr. ELLIS (of Falmouth), in proposing the health of the chairman, made the following allusion to the Mining School—I trust that we may hear, before the three days are ended, that he has been successful with respect to the Mining School. I am happy to say that some influential gentlemen have interested themselves in that subject, and I hope that he will give us some good account of his progress before the three days are over.

Sir CHARLES LEMON said—I thank Mr. Ellis for the observations he has made, and also you who have so kindly seconded what he has proposed. With respect to the Mining School, it will be out of my power, in the course of a few days, to lay any thing before the county, or to give any kind of promise whether the thing will succeed or not. I have not the slightest doubt that before very long—perhaps I may not live to see it—after the example that has been produced before the county by the examination of those boys, such an institution will be established. Since the examination, I have heard that it not only produced a great sensation here, but also in London, where they have been surprised at the results that have been achieved by a few months' application in two successive years. It is considered, by people who are better able than I am to form an opinion, that it has solved a very important problem with regard to public education. With respect to the success of the undertaking at the present moment, I can say no more than this—that it is my earnest wish to carry it out by all the means in my power. But, at the same time, every body must be aware that there are conflicting interests to be brought together. I know that, unless there is conciliation and concession on one part or the other, neither this nor any other important matter, combining different interests and opinions, can succeed. So strongly do I feel that, that I have fully given up the idea of adapting my views exactly to suit the opinions of any one party, and I aim rather at that which will expose no one to degradation, and which ought not to give offence to any class of opinions. If the matter is taken up—and I propose in a very short time to bring it to a test by an appeal to the county (not by a public meeting, but by some other means)—if the matter is taken up, my plan will be to bring forward a bill, the heads of which I have to a certain degree prepared, and shall submit to some of my friends. I have consulted some of them, Captain Thomas Lean among the number, who are acquainted with the way in which mining affairs are managed, and I understand from him that about the beginning or middle of November there will be a fair opportunity of testing the opinion of the mining interest at their different accounts. With regard to that subject I am perfectly prepared; I shall certainly neglect no opportunity of inducing the county, as far as I can, to accept the offer which I have made.

On the following day, the PRESIDENT said, he had just been informed that the Rev. Canon Rogers had for some time past made use of the ingenious mode of Mr. Fox for blasting rocks. It had been found to be entirely successful, and the miners themselves were exceedingly fond of it, and, in point of fact, would make use of no other.

Mr. HOSKING explained his ingenious machine to substitute the use of the racket wheel. It would be impossible to give a good description of this contrivance without the aid of diagrams, which were used to explain it, and we must, therefore, refer those of our readers who are interested in the machine, to the report of the society, where they will find what they require, properly illustrated.—[We shall endeavour, in an early Number of the *Mining Review*, to give the description at length, accompanied with the requisite engravings.]

Mr. JORDAN said, that Mr. Hosking omitted to state one thing of great importance, and that was the advantage that was to be derived from the invention, and went on to supply that deficiency, by saying that it would enable an engine to work a whim and stamps at the same time. The larger an engine was the better duty it performed; therefore, it was an advantage to employ very large engines. If they could provide work for a large engine—and this invention would enable them to do so—they made it do more duty. That might be better understood by his saying that two small engines would burn more coal to do the same quantity of work than one large one would.

Mr. JORDAN then explained, in a very familiar manner, the application of galvanic electricity to the firing of gunpowder, and having applied the connecting wires to a battery at the table, fired, in a moment, a small cannon that was at the other end of the building. The battery which he used was one of recent construction, by Mr. Sturgeon. It consisted of very common materials, and was very applicable for mining purposes. It was made of cast-iron cups, with amalgamated zinc in them. They might be excited with diluted sulphuric acid, and it was found to be very constant in its action, and of very great power. This mode of firing could be used in blasting rocks, without the slightest possibility of danger from hanging-fire or any other cause, because it was impossible that the powder could be fired if the wires were removed from the battery. Rocks might also be fired at any distance, so that its safety was a great recommendation. Mr. Martyn Roberts, who exhibited here on a former occasion, had been very active in forcing the application of this, and had been very successful. He had now published a small treatise on the subject, which Mr. Jordan hoped would soon be in the hands of all our miners.

Mr. JORDAN then applied the same power to the working of the telegraph, after which he proceeded to describe the application of zinc and electro galvanism for the prevention of iron from corrosion, showing that, by attaching a piece of sheet-iron to zinc, the corrosion in boilers might be prevented. So important was this discovery deemed, that, on the previous day, an agent of the Consols told him that he considered it would be worth a thousand a-year to them in the protection of their boilers.

Sir CHARLES LEMON stated, that he had that morning had a letter put into his hands from Canon Rogers, which he would read. The letter, after stating that a meeting of the Dunstanville Charity Trustees prevented the Rev. Canon's attendance that morning at the Polytechnic meeting, proceeded to speak of the propriety of making endeavours for the early introduction of machinery for lowering and raising miners; and concluded by offering a PREMIUM OF FIFTY POUNDS to the person who shall have been employed in erecting machinery for raising miners from underground in any Cornish mine, which machinery shall have worked efficiently for not less than three months. The depth from which the miners are to be raised being not less than one hundred fathoms. Sir C. Lemon observed, that the object referred to in this letter had not been lost sight of; and he sincerely hoped and believed that a communication would shortly be made to the society, that would hold out a fair prospect of the immediate application of the desired machinery.

On the following day, several of the experiments shown on the two previous days were repeated, particularly that of applying the galvanic battery to the firing of gunpowder, and the advantages of so firing several holes together in working mines and quarries, were fully explained. The greatest advantage produced by a simultaneous double or treble firing, is the disturbance of more rock, through the double vibration, with the same quantity of gunpowder, than could be produced by a succession of single explosions, and there would also be a great saving of time.

MINE ACCIDENTS.—John King was killed by falling into a shaft (about forty fathoms) in Wheal Friendship Mine.—William Edwards was seriously injured by the falling of a portion of the wall of the engine-house at the Wherry Mine.—Thomas Cock, while at work in one of the shafts at Wheal Owler Mine, the lift from under which he was removing some rubbish slipped down, and cut off three of his fingers.

CHESTER AND CREWE RAILWAY.—This line was opened to the public on Thursday last, when a train of carriages performed the journey of twenty-five miles in eighteen and a half minutes. The opening of this line shortens the distance between the Cheshire side of the Mersey and the metropolis by fifteen miles.

MINING CORRESPONDENCE.

ENGLISH MINES.

HOLMBUSH MINING COMPANY.

Oct. 5.—I beg leave to inform you that the lode in the 100 fathom level, west of the engine-shaft, is still of an encouraging description, being 1ft. 4in. wide, and worth about three tons of ore, or 36*l.* per fathom. In the winze sinking below this level the lode is one foot wide, and worth about 12*l.* per fathom for ore. In the ninety fathom level, west of James's winze, the lode is 1 ft. 2 in. wide, and worth about 8*l.* per fathom. In the ninety fathom level, west of Dinnis's winze, the lode is still a rich course of ore, being two feet wide, and worth from four to five tons, or about 36*l.* per fathom. The eighty fathom level, west of the engine-shaft, is apparently driving the large cross-course, the end being now in favourable killas ground. In the winze sinking below this level the lode is 1 ft. 4 in. wide, and worth about three tons, or 30*l.* per fathom. The lode in this level, driving east of the engine-shaft, is about one foot wide, composed of mundic, spar, and peach, with small proportion of copper ore. The stopes in the back of the same level are still in a rich course of ore, the lode being two feet wide, and worth six tons, or about 50*l.* per fathom. In the seventy fathom level stopes the lode is still very productive, being 1 ft. 8 in. wide, and worth 3½ tons, or about 30*l.* per fathom. In the sixty fathom level, south of the lead course, no part of the lode has been taken down during the past week. This level, east of the engine-shaft, is for a short time suspended, the men being employed to sink a few fathoms of the back in the ore ground lately driven through, where the lode is very promising, being two feet wide, and worth two tons of ore, or about 12*l.* per fathom. The eastern stopes, in the back of this level, are such as last reported; the lode is one foot wide, and worth about 15*l.* per fathom. The pitches upon the whole are still looking favourable.

F. Phillips.

TRETOIL MINING COMPANY.

Oct. 5.—I beg to send you the report of this mine, which is as follows:—The ground in the engine-shaft is favourable, at present the lode is 1 ft. 3 in. wide, producing good ore, much improved in the last week. The lode in the thirty west is about 1 ft. 3in. wide, opening tribute ground. The lode in the winze sinking on this end is 1 ft. 6 in. wide, opening very good tribute ground. The lode in the thirty east is six inches wide, opening tribute ground. In the rise, in the back of this level, the lode is one foot wide, opening good tribute ground. The lode in the twenty fathom, east of Bray's shaft, is one foot wide, opening good tribute ground. The lode in the twenty fathom, west of Johns's, or Johns's lode, is six inches wide, unproductive at present. The lode in the ten fathom level, east of Bray's, is split, but appears to be approximating towards a junction; north part, six inches wide; south part, three inches wide; the operations in driving this end are opening good tribute ground. The lode in the rise, west of Johns's, at this level, is three inches wide, opening good tribute ground, the ore being very rich. In the adit, east of Bray's, we have been cross-cutting the past week, but have no lode in the end at present. The cross-cut, west of Johns's, at this level we have cut through the capel of the lode intersected, which no doubt is Tregellas's lode, and are driving towards the Mine Park lode, in favourable ground. We intend to sample next Monday 200 tons of ore, being about the actual quantity of ores raised in September,

H. Williams.

UNITED HILLS MINING COMPANY.

Oct. 3.—Adit End, east of Eastern Shaft—Driving south in search of more ore. Adit End, west of Clarke's Shaft—Lode 1 ft. 6 in. wide, producing some good ore. Thirty-six Fathom Level, east of Turton's Shaft—Lode small, and poor. Thirty-six Fathom Level, west of Turton's Shaft—Lode three feet wide, orey throughout, but of low quality. Forty Fathom Level, west of James's Shaft—Lode 1 ft. 6in. wide, producing a small quantity of ore. Stopes, Bottom of Forty Fathom Level, west of Nettle's Winze—Lode 3 ft. 6 in. wide, good ore. Stopes, Bottom of ditto, west of Webber's Winze—Lode 4 ft. 6 in. wide—two feet producing ore of a fair quality. Three stopes, back of ditto, east of ditto—In these stopes the lode is 3ft. 6in. wide, orey throughout. Stoping, Forty Fathom Level, on north part of lode—Lode four feet wide, coarse in quality. Forty Fathom Level East, with back on tribute at 2s. 6d.—Lode three feet wide—1 ft. 6 in. very good ore. Eastern Shaft, sinking—Lode three feet wide, with stones of ore. Fifty Fathom Level, east of Williams's—Lode 1 ft. 6 in. wide, poor. Fifty Fathom, west of ditto—Lode 3 ft. 6in. wide, orey throughout, but not rich. Fifty Fathom Level, east of Diagonal Shaft—Lode 3ft. 6 in. wide, orey throughout, but not rich. Williams's Engine Shaft—Lode 3 ft. 6 in. wide, producing but little ore.

C. Penrose.

WEST WHEAL JEWEL MINING ASSOCIATION.

Oct. 5.—We have resumed sinking Buckingham's shaft in the past week. In the forty-two west of Wheal Jewel, lode one foot wide, composed of spar, mundic, and spots of grey ore. In the forty two east, on ditto, the lode is 2 ft. 6 in. wide, producing two tons of ore per fathom, ground favourable for driving. In the thirty west, on Wheal Jewel, lode ten inches wide. In the twenty west, on south lode, the lode is worth 10*l.* per fathom, ground still favourable for driving; this level is about nine feet beyond the thirty fathom level—this we consider a favourable indication. Rising in the back of the twelve, on Wheal Jewel lode, worth 4*l.* per fathom. Deep adit west, on south lode, worth 6*l.* per fathom. Our tributers are working with spirit, and getting good wages.

S. Lean.

WHEAL LEEDS MINING COMPANY.

Oct. 3.—In the eighty fathom level west the lode is one foot wide, producing one ton of ore per fathom. In the eighty fathom level east the lode is 1 ft. 6 in. wide, kindly, but not rich. In the sixty fathom level east the lode is one foot wide, kindly, and producing good stones of ore. The ground in the cross-cut continues hard; and the seventy fathom level is still suspended, owing to the water.

C. H. Richards.

SOUTH WHEAL NEPTUNE MINING COMPANY.

Oct. 5.—The lode in the twenty fathom level is still small, but improved in appearance, and the ground is much better than it has been. I am happy to tell you that we have in the thirty fathom level a very promising lode, three feet wide, with stones of ore, and, from its appearance, I think we shall be obliged to sink the shaft ten fathoms deeper, as, from the very great improvement which has taken place, both in the size and quality of the lode, in the last ten fathoms, it is only fair to expect a good lode as we get deeper. We have now stones of ore, which we are dressing, and the only thing wanted appears to be to get down to a forty fathom level.

J. Lyle.

REDMOOR CONSOLIDATED MINING COMPANY.

Oct. 2.—Herewith I beg to hand you the following particulars relative to this mine, by way of report. We have to-day held the public setting for October, and have set the north engine-shaft to commence sinking for a fifty fathom level. The contract with the men (nine in number) is as follows, viz.:—Sink six feet of the engine-shaft, change the forty fathom drawing lift to a plunger, cut cistern plat, bearer holes, and fix the same, with the necessary alterations required throughout the engine-shaft—to have per bargain 36*l.* At the forty fathom level we have driven about four fathoms south of the shaft, towards the three lodes before us. The first, we expect, will be intersected in driving about twelve feet more; the ground here is rather a hard killas. At the thirty fathom level driving east, on the Great Copper lode, we find it to be from four to five feet wide, composed chiefly of capel, spar, and mundic, with spots of rich yellow copper ore, but poor for the latter, although the appearances are still encouraging. We expect, in driving a short distance further, to cut the silver lead lode. Hurl-down shaft is sunk from surface 14 fms. 2 ft.—the ground is hard, considering its shallowness; we give 4*l.* 10*s.* per fathom, by six men. In the south part of the sett we have a party of men opening north on the lead lode, at the adit level—we consider the lode appears to be getting into a more settled state than heretofore; and we are of opinion it is desirable to extend north on its course until we get into a better or more congenial strata of ground, which is at a short distance before us, and in which there are some east and west lodes passing or crossing through. We have four pitches working on the north mine—viz., two at 10*s.* out of 1*l.*; one at 11*s.*, and one at 13*s.* 4*d.*

R. Rowe.

TINCROFT MINING COMPANY.

Oct. 6.—Having written you pretty fully on the appearances of this mine on the 22d September last, I cannot do better now than refer you to that report for the value of the lode in the different levels, shaft, stopes, &c. I feel pleasure in saying that nothing has retrograded since that time; the 100 fathom level has improved, and is looking well for tin; you will observe by the setting report sent you by this post, that we have thirty-four pitches now in course of working, employing 160 men, and sixty-nine tutwork men, besides all other incidental labourers. Our new engine-shaft is now about thirty fathoms under the adit, near the bottom of which we have discovered a very promising lode, though not containing much ores at the present depth, warrants the expectation of it becoming profitable in depth. The lode I have just referred to is not the lode for which the shaft is being sunk (viz., the Old Tincroft lode), that lode is still many fathoms to the south of the shaft, towards which we shall drive a cross-cut after sinking a few fathoms deeper. The ground of late has been hard at Palmer's shaft, so that we are not sinking so fast as could be wished. You will observe by the tribute setting report that the tributers for the different pitches are come down very considerably, from the improvements that have been recently made in them. We hope to sell 800*l.* worth of copper this month, and 900*l.* worth of tin, *i. e.*, ores for last month.

W. Paul.

TAMAR SILVER-LEAD MINING COMPANY.

Oct. 1.—Yesterday we held the public setting here for this mine for the present month (October); the number of pitches set was nine; there are eleven others working, their taking not out until next setting—making altogether twenty pitches, varying from 6*s.* 8*d.* to 14*s.* out of 1*l.*, and, as usual, on the value of the lead only; the number of hands employed on tribute are fifty men. In reference to the tutwork department, we have the same number of levels driving as reported to you in my last—viz. seven, and one winze sinking, employing thirty men on tutwork. The appearances of the different levels are as follow:—At the 135 fathom level, going south of the engine-shaft, the lode is 2 ft. 6 in. wide, orey, and has a promising appearance. In the 125 fathom level we are sinking a winze to the 135, the lode there is small, and poor. In the 115 fathom level the lode is three feet wide, composed of small branches of rich ore. At the 105 fathom level the lode is one foot wide, and yielding some good work. In the ninety-five fathom level the lode is two feet wide, about six inches of which is rich ore. At the eighty-five fathom level the lode at present is disordered, with soft slide, or flucan ground. The seventy-five is unspeaded for a short time, until we can bring a greater supply of air to that place from the sixty-five fathom level, and we are using the means to accomplish that object. At the sixty-five fathom level the lode is large and promising, producing some ore. In the forty five fathom level no improvement has yet taken place. On the whole, I beg to say that I see but little alteration in the appearances of the mine at the present time beyond what it has been during the last three months. We sampled on the 23d ult., computed fifty-six tons of rich ore—viz., fifty and a half from underground, and five and a half from the steam stamps. The latter is of high produce, both for silver and lead, and the parcel throughout you may expect will fetch a good price.

R. Rowe.

COMPRESSED AIR AS A MOTIVE POWER.

[From the Paris correspondent of the *Globe*.]

Several distinguished engineers and other scientific men attended on Saturday to witness a series of experiments on compressed air, at the late establishment of M. Perrier and Co., at Chaillot. The inventor of the various new and ingenious modes of applying this power, M. Andraud, a gentleman well known in the scientific and literary world, began by exhibiting a small carriage, which was set in motion by compressed air on a small railway laid down for the purpose. This carriage was moved up and down several times at the rate of about twenty-five miles an hour. The air, compressed only to about twenty-five atmospheres, which is little more than one-third of the power to which it can be compressed without danger of explosion, is contained in a proof cylinder or reservoir, which supplies the pistons in the same way as for a steam locomotive. M. Andraud states that two of these cylinders are sufficient for the supply of a locomotive for several miles on a railway; and as air can be compressed almost without expense wherever there is a stream, or even a windmill to work the machinery, fresh charged cylinders can be kept ready at stations, and applied to the locomotive, this being the work of only one minute. The improvement in M. Andraud's air locomotive on all others which have been invented is in the application of a regulator, by which the air is supplied with unfailing regularity and certainty, and which is under the full control of the engineer, and in the mode of dilating the air by heat, so as to cause great economy. In dilating air, it is necessary, for the purposes of locomotion, that it should be done very rapidly, or otherwise the speed cannot be kept up. It cannot be dilated in the cylinder or reservoir without great danger of explosion; and by the ordinary process only the external surface of the air immediately exposed to the action of heat is rapidly dilated, the internal molecules, air being a bad conductor, requiring great time for dilatation. M. Andraud gets rid of all this difficulty by passing the air through a very long spiral tube, immersed in boiling lead, and in this way the whole is dilated in the twelfth part of a second, and a reservoir of air thus dilated gives 5000 strokes of the piston, whereas the same quantity of air undilated gives only 2200. Another of the experiments was with an air cannon. Balls were thrown from it, which, at a distance of 250 yards, broke in the roof of a building, and lodged with great force in a wall, although the air was compressed to only twenty atmospheres. M. Andraud proposes that batteries in fortified towns shall be worked by compressed air instead of powder, the expense, where there is water power or wind to compress the air, being, according to M. Pouceilt, only one 75th of that of powder, and if compressed by a steam-engine about one 50th. M. Andraud imagines that field artillery may be worked in the same manner, as the horses, in drawing the guns to the field, would, by the motion of the wheels, fill all the reservoirs necessary for a long battle. The next experiment was on the power of compressed air in raising water either for the supply of towns, or for the draining of marshes, mines, &c.; by a very small apparatus, a column of water was thrown to a height of seventy-five feet.

PATENT WATER-WHEEL.

An experiment was lately made at Greenock, of a sixty-horse power water-mill, worked by Messrs. Whitelaw and Stirrat's patent water-wheel (of which frequent mention has been made in our columns). The advantages of this wheel had been previously proved in mills of smaller power, but it was questioned whether it would answer in those of greater dimensions. The experiment with the sixty-horse power mill seems to have fully supported the expectations of the patentees, if we may judge from the following account of the work performed, given in the *Paisley Advertiser*:—"The height of fall is thirty feet, and the quantity of water used was, as nearly as may be, 13,000 cubic feet per minute. The power produced by this column of water on an overshot wheel of the best construction, would be about fifty-three horse power; there is, therefore, a balance of about seven-horse power in favour of the patent mill. But this does not show its advantages fully. In an undershot mill, where the fall is but three or four feet, the power obtained is only 33 per cent. In the more favourable case of a breast mill, with a fall of ten or twelve feet, about 60 per cent. is obtained, and in an overshot wheel of about thirty feet, not more than 70 per cent., under the most favourable circumstances, is obtained; while in the case of the patent mill, the gain is equal to about 80 per cent. To this may be added, that whether the quantity of water be abundant with a low fall, or scanty with a high fall, the new mill is calculated to reap alike from both all the derivable advantages. There is another point, too, wherein the patent mill has a very decided advantage over the common water-wheel. A water-wheel of thirty feet diameter makes about two revolutions per minute—hence, to bring up the speed necessary for ordinary manufacturing purposes, a great deal of gearing must be made to intervene. This will frequently occasion a loss of three or four horse power—a loss which is avoided by giving a revolution of ninety to the first moving shaft, while all the expense of the intervening gearing is saved. The four most prominent advantages of the patent mill over the water-wheel, are, 1st, its first cost is a very great deal less; 2d, it produces more power with the same column of water; 3d, it is better adapted to every kind of fall; 4th, it adapts itself by the regulating power of its governor far more effectively to the varying work it may have to perform. Its secondary advantages are, that it is more speedily fitted up; it requires far less room, inasmuch as its pit may be flowed over, and no space lost. The quantity of material being small, it admits of easy removal, and its simplicity of construction is so great, and its friction so little, as to remove almost everything like tear and wear."

The *Greenock Advertiser*, after extracting the above article, observes:—"We have little to add to what our contemporary has stated, in regard to the patent water-wheel. Perhaps the advantages of this machine, arising from its little liability to tear and wear, might be brought more prominently into view. In point of fact, it is not likely, barring accidents, to require repair for half a century. We may also mention its applicability to small runs of water falling from a great height, and for which the common wheels are useless. For example, on a small rill discharging 40 or 50 cubic feet of water per minute from a height of 1000 feet—and there are many such in the Highlands—the patent mill might be erected at a small expense, and worked up to upwards of 100 horses' power. When the number of these mountain streams is considered, the amount of power which, by means of this machine, might be made available, is incalculable. We shall just advert to one other point, but it is one of no small importance. By the self-acting governor attached to the wheel, the speed is kept at all times uniform and regular, although any part of the machinery which it may be driving should be suddenly stopped. These are very important advantages, and we shall conclude by reiterating what we said by all who were present at the trial lately made, that the invention of Messrs. Whitelaw and Stirrat of Paisley, will ere long effect a complete revolution in the mode of applying water power."

Leeds and Selby, and York and North Midland Railways.—The directors of the Leeds and Selby Railway have (subject to the approbation of the shareholders) agreed with the directors of the York and North Midland Railway, to let to the latter company, for the term of thirty years, with the option of purchasing, at the expiration, the whole of the Leeds and Selby Railway, with the buildings, engines, carriages, &c., upon such terms as will allow the shareholders 5 per cent. per annum upon their invested capital of 210,000*l.*, after paying the interest upon the borrowed capital of 130,000*l.*, and leaving a very considerable surplus for the gradual liquidation of the debt, which will go far towards its extinction before the termination of the lease.—*East Riding Herald.*

Great North of England Railway.—This railway, which extends from York to Darlington, is to be opened on Wednesday, the 25th of November.

Railway to Lytham.—The line of country between Lytham and Kirkham is now being surveyed, to ascertain the best route for a railway from the former place to join the Preston and Wyre Railway at Kirkham.—*Preston Chronicle.*

BORING FOR ROCK SALT IN LUXEMBURG.

[Extract of a letter from M. Levallois, Engineer in Chief of Mines.]

There are at this moment at work at a sounding, at the village of Cessingen, about a league from Luxemburg, which deserves particular notice. On the 1st of April, 1839, they had attained the depth of 534 metres (= 1752 feet) the greatest, certainly, which has been reached in Europe up to the present time.

The object of this enterprise is rock salt. The undertaker is M. Rost, a skilful saxon engineer, on account of a company, in which the most notable financiers of Brussels are interested. It was commenced on the 1st of February, 1837, and they are now advancing at the rate of a metre in twenty-four hours. To proceed successfully, at a depth hitherto unattained, requires a directing intelligence, capable of surmounting obstacles which continually present themselves in works of this nature, especially when I add, that it is done by a stem borer, and that the stem, or rod, is but three-fourths of an inch in thickness. It belongs to M. Rost to explain, in detail, the various inventions which he has devised, but I wish to give an idea of what he calls his "parachute," because to this he attributes, in a great degree, the successful progress of his boring.

It is well known that upon the sounding rod, if a borer breaks, which is often the case, the unsupported portion of it in falling, is broken by the shock into several fragments, which become so wedged together in the hole as to render their abstraction very troublesome. To prevent such an effect from the fall, M. Rost contrived his parachute.

This additional piece is attached to the lower part of the rod, which is there strengthened for the purpose, so as to be certain that the fracture will not occur at that place. It consists of a wooden sleeve or muff, through which the rod can freely play through a space rather greater than the leap, or stroke of the sound. Below this muff are attached by iron bolts several targets of superimposed leather, of a diameter just equal to that of the hole which is thus, as it were, stoppered by a kind of piston. Now, when the stem breaks, the upper part can fall only through a space equal to the play of the borer through the muff, and when the stop which limits this play strikes the head of this piece, it can only descend very slowly, in consequence of the friction of the leather against the sides of the hole.

M. Rost has also diminished the frequency of ruptures, by making the first three-sevenths of his rod of wood four inches square.

The hole is tubed, four tubes having been introduced of decreasing diameters. M. Rost does not shrink at the idea of carrying his boring to the depth of 700 metres, or 2300 feet. The beds already traversed are,

	Metres.
Calcareous rock like	61·00
Luxemburg freestone	23·17
Greyish sandy marl	25·43
Upper Keuperin marl, with gypsum and saline clay ...	100·00
Stuttgard free-tone	9·90
Lower Keuperin marl, with gypsum and saline clay ...	103·10—324·60

DISCOVERY IN VOLTAIC ELECTRICITY.

We have received the following account of a late discovery in electrical science from a correspondent:—

"One of the greatest discoveries of the present or any former age has been achieved by the genius of the Hon. Mr. Mullins, late M.P. for Kerry, one of which I hesitate not to assert, equals in brilliancy the great discovery of the alkaline metals by Davy, and in the importance of its results, and the utility of its applications, far exceeds it. Mr. Mullins is already known as the inventor of various scientific instruments, but more particularly of the voltaic arrangement which bears his distinguishing appellation of the 'Sustaining Battery'—the consequence of a fair induction from certain facts previously ascertained and made public by Pouvett and Becquerel, and which, without any disparagement of the constant battery invented by Daniel, is, I believe, generally admitted to be superior to it in simplicity of arrangement, economy, and power. In these batteries (Mullins's and Daniel's) a current of force united with constancy was first developed; for, though Becquerel had previously established the advantages derivable from the use of a diaphragm between the metals or fluids, his form of battery constructed for crystallisations, only produced the weak though constant currents, and is, for this reason only, useful for the special purpose for which it was designed. The mode, therefore, of obtaining an electrical force, either of great quantity or intensity, and not only constant but sustained and equal in its action for days, or weeks, or months, which Mr. Mullins's arrangement eminently succeeded in accomplishing, was itself a great and important stride of science, calculated to lead to new and useful applications of a power, the greatest on which to theorise, but the most refractory to control. Without it, the application of electro-magnetism, as a motive power, was absurd in idea and impossible in practice—with it we are daily acquiring increased importance, an all-powerful antagonist to steam in its various applications. But it was not enough to possess the means of obtaining a sustained force of electricity, without the power, at the same time, of developing that force to the required extent—with economy of cost and space. This Mr. Mullins early saw (as his published paper explains) could not be accomplished by the sustaining battery in any of its forms, even with his latest improvements; he therefore persisted in his researches upon a subject at once so fertile in novel results, and so attractive in its investigation. The important discovery already alluded to has been the reward of his labours, and it is to be hoped will be accepted by the scientific world as an earnest of future results of value in this eminently useful branch of science.

"Mr. Mullin's discovery may be shortly summed up as a new arrangement or combination of elements, by which an enormous force of electricity is developed in a surprisingly small space, and at a cost so trifling, in comparison with the power obtained, as to be scarcely worth consideration. This force is a sustained one, and requires no stoppage of the machinery to which it may applied for the purpose of keeping it alive for any period required. Here then, we have an element of power applicable to all descriptions of machinery producible to any extent—economical—and 'though last, not least'—harmless.

"I have reason to believe that Mr. Mullins does not mean to content himself with what he has already done, but that, perceiving in the path he has struck out, a fair prospect of still greater improvements in the development of electricity by the same means, it is his intention to delay for a time making public the nature of his discovery, until he shall have succeeded in giving it a still greater degree of perfection and value. I would add, in conclusion, that the only approach to the development of power in a small space, as yet known, is in Grove's voltaic arrangement; but as this battery is not a constant one, and, from its very nature, cannot be made so, and is besides charged with acids, the fumes of which, in a large battery, are unbearable, it can never be brought into general use, though it must be admitted that, notwithstanding these and other objections to its employment as a source of motion, Mr. Grove deserves much credit for an invention which transcends many discoveries of the present day, not nearly so important, though much more talked and thought of, merely, it would appear, because they emanated from professional philosophers. How Franklin, and Priestly, and Cavendish, were they alive, would laugh at such an absurdity."

SMOKE NUISANCE IN LONDON—ANTHRACITE COAL.

At the Mansion-house, on Tuesday last, the Lord Mayor said he had received several communications recommending the adoption of some means of abating the great smoke nuisance which abound in the crowded neighbourhoods of the city of London, and on the river Thames, through the instrumentality of steam, and requested that his correspondents and the public should be informed, through the press, that Mr. Anderton had given notice of a motion on the subject, for the consideration of the Court of Common Council, and that all that the corporation could do to remedy the evil would no doubt be attempted.

One of the letters received by his lordship relates to steam-vessels, and stated as follows:—"I address your lordship, knowing that your influence in accomplishing improvements tending to benefit the health and increase the comforts of your fellow-citizens, is, as chief magistrate, considerable. The object I have in view is the removal of a nuisance, of which most people complain, and not without reason—I mean the steam-vessel nuisance, arising from the smoke. The proprietors of vessels have only to use the anthracite coals instead of what they now consume, and the required alteration is effected. In doing this no hardship is incurred, for though the price of anthracite coal is rather higher, a much smaller quantity is required, and a saving of a fourth, if not a third, is sure to be effected. No doubt you are aware that this kind of coal gives out neither flame nor smoke, and is much used in drying hops and malt. It might with equal advantage be used where large and constant fires are necessary, and thus the quantity of smoke which smudges our metropolis might be immensely diminished. I have seen it used in kitchens as well as in steam-vessels, and from experience can speak as to its utility. A sample of it was lately sent to Paris, from Wales, and was analysed at the Ecole des Arts, and the report is as follows:—'This coal must be much in demand, on account of its remarkable purity, both for domestic consumption and for blast-furnaces, and is a discovery of great importance for the reduction of ores and the quality of the resulting products.' It is surprising, my lord, how little this treasure, which abounds to an incalculable extent indeed, in South Wales, as at Llanelly and Burry Port, in Carmarthenshire, and other parts of that coast, is known and appreciated. Some cargoes, I believe, are sent to the London market, but if it were brought into general use, the national advantages, especially in steam-vessels, would be incalculable, and the comfort of it would soon be discovered and duly prized."

PUBLIC COMPANIES.

MEETINGS.

UNITED HILLS MINING COMPANY.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders of this company will be held at their office, in Adam's-court, on Thursday, the 22d day of October instant, at One o'clock precisely, for the purpose of deciding on the propriety of instituting Chancery or other proceedings against Sir Thomas Turton, for the recovery of the money held by him, as arrears of salary, or adopting such other resolutions in respect of the claim as may appear expedient. Also, by virtue of a requisition from certain shareholders, "for the purpose of removing Sir Thomas Turton, Bart., from the office of a director of this company, and appointing another director in the place of the said Sir Thomas Turton, if so removed."

October 1. JAMES SMITH, Secretary.

WHEAL WALLIS MINING COMPANY.—Notice is hereby given, that a SPECIAL MEETING of the shareholders in the above mine will be held at this office, on Thursday, the 29th of October next, at Four o'clock in the afternoon, for the purpose of taking into consideration the disposal of those shares on which the last call has not been paid.

By order of the directors,
15, St. Ann's-square, Manchester, Sept. 25. HENRY CARR, Sec.

CALLS.

WHEAL LEEDS MINING COMPANY.—The directors beg hereby to remind the shareholders, that the fourteen days' grace for payment of the INSTALMENT of FIVE SHILLINGS per share, due on the 1st instant, and payable at Messrs. Barnett, Hoares, and Co., 62, Lombard-street, will expire on Thursday, the 15th October, after which day, all shares claimed, but on which the deposit has not been paid, must be divided amongst the then existing shareholders.—No. 15, Great St. Helen's, October 6.

DIVIDENDS.

ENGLISH COPPER COMPANY.—The court of assistants of the English Copper Company hereby give notice, that the HALF-YEAR'S DIVIDEND, declared this day, will be payable at their house, 27, Upper Thames-street, on Thursday, the 8th of October next, and on Wednesdays and Thursdays following, from Nine till Two o'clock.

English Copper Office, Sept. 29.

PUBLIC COMPANIES.

MEETINGS.

London Cemetery Company	22, Moorgate-street	Oct.	13	12.
River Dee Company	9, Mansion-house-street		14	11.
South Metropolitan Gas Company	Three Tuns, Borough		15	12.
London Joint Stock Bank	Princes-street		17	12.
Agricultural and Com. Bank of Ireland	Office, Fleet-street, Dublin		19	11.
Margate Pier Company	Town Hall, Margate		19	11.
Independent Gas-Light and Coke Co.	London Tavern		21	12.
United Hills Mining Company	Office, Adam's-court		22	1.
Globe Insurance Company	Office		22	1.
Wheal Wallis Mining Company	Office, Manchester		29	4.
Thames Haven Dock and Railway	28, Moorgate-street		30	11.
Grand Union Canal Company	20, Surrey-street, Strand	Nov.	2	12.

CALLS.

Porth Cawl Iron and Coal Co.	10l.	Oct.	13	Union Bank of London.
General Reversionary Society	5l.		14	Hankey, Fenchurch-street.
South-Eastern Railway Co.	5l.		14	As former calls.
Hull and Selby Railway	5l.		15	As former calls.
Llanelly Railway and Dock Co.	10l.		19	Cox, Biddulph, and Co.
Dublin and Drogheda Railway	2½l.		19	Labertouche and Co., Dublin.
Cambrian Iron and Spelter Co.	2½l.		21	London Joint-Stock Bank.
British Colonial Bank and Loan	5l.		26	2, Moorgate-street, London.
Maryport and Carlisle Railway	5l.		26	As former calls.
Royal Mail Steam Packet Co.	5l.		31	Robarts, Curtis, and Co.
Grand Collier Dock Company	1l.		31	Smith, Payne, and Smiths.
European Gas Company	2l.	Nov.	4	Ladbroke, Kingscote, and Co.

DIVIDENDS.

Alliance Gas Company .... Office, Finsbury-circus .. Oct. 1.

WEEKLY RAILWAY TRAFFIC RETURNS.

LONDON AND BIRMINGHAM RAILWAY.

[*Length of Line, 112½ miles.*]

	£	s.	d.
The gross amount for conveyance of passengers, parcels, carriages, horses, and mails, for the week ending the 3d day of October	13,943	14	11
For merchandise for the same time	2,307	5	11
Cattle	155	0	0
Total	£16,406	0	10

GREAT WESTERN RAILWAY.

[*Length of Line opened, 75 miles.*]

Total Returns for the week ending 4th of October.. ... £6236 4 10

LONDON AND SOUTH-WESTERN RAILWAY.

[*Length of Line, 76½ miles.*]

Total receipts for passengers, parcels, &c., on this line for the week ending the 3d of October, £5884 14s. 8½d.

EASTERN COUNTIES RAILWAY.

[*Length of Line opened (to Brentwood) 17½ miles*]

Total receipts for passengers for the week ending 4th of October...... £479 0 3

LONDON AND BRIGHTON RAILWAY—SHOREHAM BRANCH.

[*Length of Line opened, 6 miles.*]

Total returns for the week ending 6th of October ... £127 6 10

NORTHERN AND EASTERN RAILWAY.

[*Length of Line opened, 19½ miles.*]

Total returns for the week ending 6th of October ... £380 4 8

LONDON AND BLACKWALL RAILWAY.

[*Length of Line, 3½ miles.*]

Total receipts for passengers for the week ending 4th of October...... £653 7 6

LONDON AND GREENWICH. [*Length of Line 3¾ miles.*] Week ending 4th Oct. ..... £949 8s. 1d.

LONDON AND CROYDON. [*Length of Line, 10½ miles.*] Week ending 6th Oct. . £1519 8s. 3d.

LATEST CURRENT PRICES OF METALS.

LONDON, OCTOBER 9, 1840.

		£	s.	d.
Iron, Eng.—Bar	ton 0 0 0 to	9	15	0
Do. Carg. in Wales		7	15	0
Hoops	ton	11	0	0
Sheets	ton	12	0	0
Pig, No. 1	ton	5	10	0
Do. in Wales		4	10s	5l
Foreign—Duty 30s. per ton: Swedes, co. bd.	ton	13	0	0
Russian com.	ton	14	0	0
P.S.I.	ton	14	10	0
C.C.N.D.	ton	20	0	0
Steel, Eng. Blistered	25 0 0 to	45	0	0
Shear do. do.	45 0 0 ..	54	0	0
Cast do. do.	45 0 0 ..	54	0	0
Foreign—Duty 20 per cent.: Swedes in kgs bd	ton	19	0	0
Do. Faggots bd.	ton	19	10	0
Milan bd.	ton	6	0	0
Copper, Brit.—Cake	ton	96l	100l	
Tile	do.	96	0	0
Sheets	lb.	0	1	0

		£	s.	d.
Copper—Foreign (dy. 37s.)		95l	98l	
Tin, Brit.—Blocks	cwt	4	4	0
Bars	do.	4	6	0
Banca	4 3 0 to	4	5	0
Straits	0 0 0 to	4	1	0
Tin Plates—I.C. (box)	1 8 6 to	1	13	0
I.X. do.	1 14 6 to	1	19	0
(Others in proportion.)				
Lead, Brit.—Pig	ton	19	15	0
Sheet	ton	21	0	0
Shot	ton	22	0	0
Rod	ton	22	0	0
White (dry)	ton	27	0	0
Do. (gd. in oil)	ton	30	0	0
Foreign—Span. (dy. 40s.)		19	15	0
Spelter	0 0 0 to	22	15	0
For delivery	0 0 0 to	21	15	0
English Sheets		37	0	0
Quicksilver—(dy. 1d. per lb.)		0	3	11

REMARKS.—The spelter market is flat—little or nothing doing. English iron steady. There is very little doing in English copper since the late advance. English tin is brisk and looking up; 100 tons were bought for France on 'Change at 84s., and same price refused for 100 tons more; Banca is held very firm, the stock is very small, and there is still a great disposition to buy; Straits has been sold to-day at 80s. 6d., at which price there are still buyers. English pig lead is firm at the quotations, and an advance expected.

EXPORTS OF BRITISH AND FOREIGN METALS

FROM LONDON AND LIVERPOOL, FOR THE MONTH ENDING SEPTEMBER 30, 1840.

		British.	Foreign.	Total.
Iron	tons	9,656	1,159	10,815
Steel	"	155	32	187
Copper	"	33	193	226
Ditto sheets	"	668	—	668
Tin	"	284	133	417
Ditto plates	boxes	17,201	—	17,201
Lead	tons	[illegible]	295	1,169
Spelter	"	—	87	87
Quicksilver	lbs.	—	194,019	194,019

THE FUNDS.—SATURDAY MORNING.

ENGLISH FUNDS.

3 per Ct. Consols Annuities, 88¼ ⅛ ¼ ⅛
New 3½ per Ct. Annuities, 96⅞ 97 ⅞ ⅞
India Stock, 244½
India Bonds, 15 16 dis.
3 per Cent. Consols for Acct., 88⅞ 7 8⅞
Exchequer Bills, 2½d., 2 dis. 1 4 pm.

FOREIGN FUNDS.

Columbian Bonds, 1824, 6 per Cent., 22
Danish Bonds, 3 per Cent., 74 5
Portug. Bonds, New, 5 per Cent., 32½
Russian Bonds, 5 per Cent., 108
Spanish Bonds, 5 per Ct., 22⅞ ¾ ⅞ ¾
Dutch 2½ per Cent., 49⅞ 9 ⅞

SHARES.

St. John del Rey Mine, 7
Birmingham & Derby, Railway, 45
Bristol and Exeter, 28
Eastern Counties, 8⅞ ⅞
Great Western, 81 80 79½ 80¾ 1½ 1 2
Ditto New, 44½ 3 4 3½ 4
London & Brighton, 39⅞ ½ ¾ ¾
London and Blackwall, 16⅞ ¾ ¾
London and Sth. Western, 62 1½ ¾ ¾ 2
London and Birmingham, 162½ 2 3
Ditto Quarter Shares, 29
Ditto New, 40 3½ 3
North Midland, New, 38½
South Eastern and Dover, 3 ½ 4½
York and North Midland, 48½
Provincial Bank of Ireland, 44½ 5½
National of Ireland, 15⅞
West of Eng. and Sth. Wales Dis., 17½

NOTICES TO CORRESPONDENTS.

We have received a communication from Mr. Wickstead, on the recent experiments tried on several engines in Cornwall, for the purpose of satisfying the deputation from the Dutch government of the correctness of the monthly reports of duty stated to be performed by the engines in Cornwall, which shall appear in our next.

Mr. M. Dunn's paper, on "the most general systems of ventilation, applicable both to collieries containing little or no inflammable air, and also to collieries abounding so copiously with it as to be denominated 'fiery,'" shall appear as soon as the accompanying plan of a pit's workings can be engraved.

VENTILATION OF COLLIERIES.—Several communications on this important subject are unavoidably postponed until next week.

Mr. Long Wrey's letter only came to hand this morning (although bearing date the 5th instant), consequently too late for insertion this week.

Mr. A. T. J. Martin, Penzance, will receive a note in the course of a few days.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, OCTOBER 10, 1840.

We last week felt called upon to make some observations with reference to the "Talacre Coal and Iron Company," on which occasion we submitted a few home questions, which we were in hopes would have been solved by Mr. Alderman THOMAS WOOD (the chairman), or some one or other of the directors. We have been furnished, during the week, with further information with respect to the purchase-money of 110,000l., from which we find that the transaction assumes a somewhat different form and character to that with which we had vested it. In the first place, we learn from the deed, that the purchase of this valuable property, made by Mr. Alderman THOMAS WOOD, the two worthy aldermen of Dublin (Messrs. HYNDMAN and HODGES), and the other directors, acting for and on behalf of the shareholders, was of, and from, the following gentlemen, whose names figure conspicuously in the prospectus of the company as directors, viz.—

THOMAS WOOD, Esq., Alderman and Sheriff.
WILLIAM HODGES, Esq., Alderman — J. ELLIOT HYNDMAN, Esq., Alderman
THOMAS CLOUSTON, Esq. — JOHN DAVIS, Esq.
THOMAS POTTINGER, Esq. — WILLIAM WESTON, Esq.
— JENKINS, Esq.

We thus find, that the honourable directors were not only the purchasers, but the vendors, and that the original transaction with LEVESON and BAKER is kept out of sight. This, then, is the key to the mystery in which this concern was veiled, and we now learn that Mr. Alderman THOMAS WOOD, and seven other honourable gentlemen, having made a purchase of the property, for a sum certainly not exceeding 110,000l., thought it a very prudent course to establish a company—to nominate themselves directors—to prepare a deed of settlement, recognising the acts of themselves, the principal one of which was the purchase (of themselves) of the Talacre property, at the sum of 110,000l., of which, as we correctly stated last week, 20,000l. was to be paid in money, and out of which sum 14,000l., or thereabouts, had actually been paid, as charged in the accounts made up to June last, but not submitted at the general meeting, the remaining 90,000l. being provided for by issuing (to themselves) 1800 shares of 50l. each, the whole amount being represented as paid up—thus pocketing 20,000l., less the consideration paid Messrs. LEVESON and BAKER, or other parties, in addition to one-half the number of shares of which the company is constituted, leaving to the shareholders to subscribe whatever capital might be required for working the property. We repeat, this is one of the most shameless transactions which have, of late, come under our notice, and we know not what terms we can apply to the projectors or concoctors of the scheme, sufficiently harsh to express the opinions which we entertain. Here is a property, the value of which, as a colliery, is very questionable, for we much doubt whether it could be worked, on the most economical scale, so as to leave a profit, on which some thousands have been expended, in addition to the purchase-money, which is sold and purchased by the same parties, who, by dint of perseverance and labour, worthy to be applied in a better cause, actually form a company, charging them with 110,000l., whereas, the amount paid by them for this property was far below that fixed as one which should be remunerative to the honourable directors.

We cannot suppose, for one moment, that the shareholders will, with this information before them—the accuracy of which cannot be questioned—be supine or inactive. We trust they will not only enforce the repayment of the advances they have made, but will teach gentlemen, holding the high offices of aldermen and magistrates, that they are not exempt from the application of the laws, which know no distinction.

It is not sufficient that the concern should be wound up, as it inevitably must be, for that would be allowing the eight honourable gentlemen, whose names we have set forward, to get off "Scot free" from the consequences which attach to their conduct, besides enabling them to retain the money they have already received. We write this in the immediate locality of the scene of Mr. Alderman THOMAS WOOD's oratorical display, when, to serve Ireland, he favoured some of her sons with coal debentures, on which a considerable sum was raised, although, we believe, not exactly to the extent calculated upon.

The unblushing effrontery with which the announcement was made, at the meeting held in July, that the financial affairs of the company were in so flourishing a state as would justify the payment of a dividend, must not be forgotten, while the accounts since supplied (an abstract of which appeared in our columns), studiously avoid all mention of debts and assets, as well as the fact, that 6000l., or thereabouts, was then due to the eight honourable gentlemen, and also that 1800 shares had been taken up as part of the purchase-money.

We have not space further to dilate on the subject, but the shareholders may rest assured that we shall take an early opportunity of entering more minutely into detail of the transactions, and, in the interim, we court the communications of parties interested, or possessing information.

Having, within the past few days, had an opportunity of witnessing the activity which prevails in the Wicklow mining district, from the successful application of the sulphur ores (in which that locality abounds) in the manufacture of sulphuric acid, it affords us much gratification to be able to report on the prospects which are presented, of employment being afforded to thousands throughout the coming winter, in the extraction and carriage of the sulphur ore, the demand for which is daily increasing. Taking the range of mines, Ballymurtagh, Ballygahan, Cronebane, Tigrony, and Connorree, we have no hesitation in stating, that the produce of these five mines alone, for the next six months, may be safely estimated at from 20,000 to 25,000 tons, being equal to nearly one-half the quantity of Sicilian sulphur annually imported. The sulphur lodes are found to continue in depth, and the several workings lately undertaken, in opening ground, and driving the several levels which had been previously abandoned, have already, in more than one instance, not only been remunerative to the miner, from the produce sold, but, in exploring new ground, has been the means of several discoveries having been made—Ballymurtagh, at the time of writing, being reported as looking well, with a considerable improvement in her lower levels, with increase of produce, and improvement in quality of the copper ores.

It is highly satisfactory to find that the use of sulphur ores has been attended with successful results, and thus rendered the manufacturer independent of a foreign supply, while we have reason to believe, that, by employing pyrites, a saving, both of time and money, is effected. The large deposits of sulphur ore in this vicinity are astonishing, and would alone, we have no doubt, supply, to the full extent, the demand in this country, provided new ground was broke away, in which case, however, the ore could not be rendered at present prices, with advantage to the miner, in the shape of profits, yet we consider he would do well to at once take steps for ensuring an increased supply, depending, as he can very fairly, upon the constant and steady demand at the prices now given. Should the ore obtained yield but one-half the cost attendant on its extraction, it would then be desirable for him to prosecute the workings we recommend, inasmuch, that he will be exploring new ground—will be laying open the mine—and may hit upon a discovery of copper ore, which may amply repay him. We think prices will be fully maintained, several extensive contracts having been entered into, which will, in a great measure, preclude the mines from supplying to other parties, to any great extent, for a time. We need hardly say, however, that it would be impolitic on the part of the miner to advance the price, as every encouragement and facility should be afforded to render the use of sulphur ores universal.

We have requested a friend to obtain for us the official returns of shipments made from the port of Wicklow during the present year, which we hope to be able to present to our readers in our next Number.

We observe that a meeting of the shareholders in the "United Hills Mining Company" is convened for the 22d instant, "for the purpose of deciding on the propriety of instituting Chancery, or other proceedings, against Sir THOMAS TURTON, for the recovery of the money held by him as arrears of salary, or adopting such other resolutions in respect of the claim as may appear expedient;" "also, by virtue of a requisition from certain shareholders, for the purpose of removing Sir THOMAS TURTON, Bart., from the office of director, and appointing another director in the place of the said Sir THOMAS TURTON, if so removed."

Who can wonder that mining enterprise should be at so low an ebb, as it is, unfortunately, at the present moment, when we find baronets, aldermen, and others, whose station in society was deemed the best security for their probity, acting in a manner which not only reflects discredit, and is of incalculable injury to the several concerns with which they are connected, but which has its influence on other undertakings generally. In the present instance, we find Sir THOMAS TURTON, as a director, having, in common with others with whom he was associated in the direction or management of the United Hills Mine, agreed to forego any claim for services rendered in such office, actually withholds, or pays to himself, a sum amounting to about 1000l., for his services as director, while the other two gentlemen who held office with Sir THOMAS TURTON, in strict accordance with the arrangement and understanding which existed, have made no claim, nor have they received any remuneration. It is well known, that we are far from being advocates for unpaid services, for experience has proved to us that gratuitous labour is, in most cases, the most costly. There is a line to be drawn between the non-payment for services required, and the extreme on the other side; gentlemen, whose avocations are such as hardly to enable them to attend to the duties which their private interest impose, being found directors of joint-stock banks, insurance companies, emigration companies, railways, canal, river, docks—and, more particularly, mining companies—without possessing any information or knowledge of the several subjects to which their attention ought to be directed, but who, nevertheless, take to themselves hundreds, and, in some instances, thousands per annum, for their valuable labours. In the case before us, Sir THOMAS TURTON, for aught we know, may be a first-rate genius—he may be a practical miner—a deeply read geologist—indeed, we will grant that he is all and everything fitting him for the proper and conscientious discharge of his duties as a director of the "United Hills Mining Company," and, in the performance of which he honestly earns his pay, for every labourer is worthy of his hire; but having, as such director, consented to forego any remuneration, we must say, that his conduct in this transaction, in appropriating to himself 1000l., or thereabouts, under the plea of payment for services, reflects much discredit on him, and which the resolution that the proprietors will determine on the 22d instant, will, doubtless, convince the honourable baronet is an opinion, in entertaining which we are by no means singular.

There was a something of the kind done, we believe, in the virtuous "English Mining Association," by Mr. DUNCAN CAMPBELL. It is really too bad, and nothing but publicity will ever shame men who thus hold correctness of principle so lightly.

LATEST INTELLIGENCE.

REDRUTH, OCT. 8.—Average standard, 114l. 7s.—Average produce, 8¼.—Average price, 7l. 5s. 0d.—Quantity of ore, 3348 tons.—Quantity of fine copper, 291 tons 8 cwt.—Amount of money, 24,124l. 0s. 0d.—Average standard of last sale, 120l. 10s.—Produce, 6¼.

PRICES OF SHARES IN LIVERPOOL.—London and South-Western Railway, 52l.; Great Western, 81l. 10s.; ditto (half-shares), 45l. 10s.; Edinburgh and Glasgow, 29l. 5s.

PRICES OF SHARES IN BIRMINGHAM.—Coventry Union Bank, 4l.; Stourbridge and Kidderminster, 19l.; Walsall and South Staffordshire, 3l. —Great Western Railway, 81l.; ditto (half-shares), 44l.; Birmingham and Gloucester, 75l.; Manchester and Leeds, 94l.; ditto (half-shares), 35l.—*Midland Counties Herald.*

IRONMASTERS' QUARTERLY MEETINGS.—The ironmasters' quarterly meetings will be held at Walsall, on Tuesday, October 13; at Wolverhampton, on Wednesday, October 14; at Birmingham, on Thursday, October 15; at Stourbridge, on Friday, October 16; and at Dudley, on Saturday, October 17.

RANGELEY'S SAFETY ROTATION RAILWAY.

We have on more than one occasion directed attention to Mr. Rangeley's patent, with description of the models—exhibiting at the Polytechnic Institution—but having before us an abstract of the paper read by Mr. J. I. Hawkins, at the meeting of the British Association, which enters more into detail than embodied in any description which has yet appeared, we are induced to give further publicity to an invention, which will, if found to be successful in its application on a working scale, cause so great a revolution in the construction of railways.

Mr. Hawkins very correctly observes, that Mr. Rangeley's patent is a complete inversion of the ordinary construction, inasmuch that the wheels are made to revolve on fixed bearings, placed in two parallel lines along the road; and the carriage, without wheels, is built upon a pair of running rails, carried along upon the peripheries of the train of wheels, kept in revolution by a steam-engine fixed at every mile or two of the road. It is intended to have the wheels three feet diameter, and three feet apart, which will give 1760 wheels on a mile. They are to be driven by a succession of endless bands, one band in every case passing around two pullies attached to every two contiguous wheels.

The carriages are designed to hold forty passengers each, with their luggage; the whole, including the carriage, not to exceed five tons: the running rails always to bear on eight or ten wheels, so that no wheel shall have to support more than about 10 or 12 cwt. The wheels, therefore, need not weigh more than half a cwt. each, to be sufficiently strong for supporting the carriage. It is found by experiment, that three ounces, suspended from the periphery of such a wheel, causes it to revolve.

It is a well-known fact, that any weight that sets a wheel in motion, will, if continued, cause the same to revolve with accelerated velocity, until the resistance of the atmosphere becomes equal to the accumulated force—after which a steady speed will be kept up. It is inferred, from observation, that the wheels, driven with a continued force of three ounces each, would acquire a constant speed of about thirty miles an hour. It is also ascertained from experiment, that eight pounds would draw a ton weight on four three-feet wheels running on level rails, and thus that a force of forty pounds would draw the carriage.

The following table is constructed from these data, by which it is found that seventeen horse-power of steam-engine is required to turn each mile of wheels, and two horse-power to drive each carriage.

Mr. Hawkins remarked, that the seventeen-horse engine is a constant power to turn the wheels, which requisite power is neither increased by additional carriages nor by acclivities—each carriage added taking only two horse-power more to carry it along upon a level; and an acclivity of 1 in 180 doubling, 1 in 90 quadrupling, and 1 in 45 octupling only the tractive force, without in any case requiring more than the seventeen horse-power to turn the wheels.

It is practicable by this system to ascend steeper acclivities than ordinary, and, therefore, the expense of cuttings and embankments would be reduced, and railways made available in hilly districts, from which they are now excluded—nothing more than the bare weight of a slight carriage, its passengers, and luggage, being to be elevated—thus saving the enormous power necessary for carrying up a heavy locomotive engine and its appendages.

The following is the table appended to the paper:—

Carriages every two minutes.	Passengers. Every 2 minutes.	In 12 hours.	Horse power—per mile in two minutes. On a level.	Up 1 in 180	Up 1 in 90.	Up 1 in 45
1	40	14,400	19	21	25	33
2	80	28,800	21	25	33	49
3	120	43,200	23	29	41	65
4	160	57,600	25	33	49	81
5	200	72,000	27	37	57	97

We are given to understand that Mr. Brunel, and other engineers, have expressed themselves well satisfied with the advantages attendant on the patent, and that immediate measures will be taken for introducing it on one of the short lines or branches, with the view of testing its capabilities.

HOLMES'S PATENT FOR IMPROVEMENTS IN THE CONSTRUCTION OF IRON VESSELS.

The important results which have arisen from the application of steam-power, whether considered with relation to land or water communication, have, in a great measure, revolutionised our old habits, and, from the facility of intercourse, led to consequences which the most sanguine supporters could never have contemplated. The vast increase of passengers by railway beyond that of common roads—the monthly, we had almost said fortnightly, returns of the number of passengers by the *Great Western*, *British Queen*, *President*, *Britannia*, and other trans-Atlantic steamers—prove to us that we are progressing—that we are, indeed, "going a-head." As we find that a trip to Kingstown from Liverpool may be made in less than nine hours and a half, and a voyage, or excursion, from Bristol to New York, in thirteen days, science and enterprise would appear determined to combine in rendering a trip to India one of an excursion of pleasure; and, by developing to us the resources of the British possessions in that clime—by the opportunity afforded of personal observation—at once open a market with tenfold the advantages derived at the present moment by our trade with the East. To effect this, however, it is clear that a different description of vessels is required, for although voyages may be made, yet there is not that degree of certainty which is necessary to be calculated upon, or those facilities which will enable the merchant or ship owner, by extent of tonnage, to avail himself of all those advantages which the accelerated speed of transit presents.

Having thus given the opinions entertained by Mr. Wheelwright of the advantages which iron vessels have over those of wood, we will at once proceed to notice the patent of Mr. Holmes, whose plans have been for the past two or three years before the mercantile world, and more particularly that branch whose operations are principally confined to India. The plan of Mr. Holmes is that of the construction of iron vessels, of increased tonnage, and their strength being dependent on their internal structure, instead of the shell, according to the present mode of building. By a combination of frame-work, composed of iron, he is enabled to form the skeleton of his vessel, which then receives the shell or outer skin, by which means the plates are of less weight and substance, not having to resist the outward pressure, from the peculiar construction of the internal framing or skeleton form. We have had an opportunity of seeing the working drawings of an iron steamer, of 2600 tons, on Mr. Holmes' principle, and did we possess nautical or mechanical knowledge to justify the expression of an opinion, it would be decidedly favourable—the explanations afforded being so lucid, as to enable those little acquainted with the subject to acquire information, and that of a satisfactory nature—but as our object is alone directing attention to the subject, that those interested may inquire into the details necessary to enable them to judge of the merits of the patent, it is the less important.

In addition to the proposed construction of the vessel, whereby the weight of iron is considerably lessened, and the cost, consequently, reduced, Mr. Holmes proposes to build his vessels so as to insure the safety of the ship and its prevention from foundering—which form a prominent claim on attention—which is effected by forming air-tight vessels, by the arrangement in the holds, and the introduction of air-pumps, the application of caoutchouc bags, &c. Several other improvements have been secured by Mr. Holmes's patents, which will merit the attention of those associated with our maritime service, and which will, doubtless, from their importance, press themselves on the attention of Government.

The following observations, on the advantages of iron compared with wood steamers, drawn up by William Wheelwright, Esq., are worthy of perusal:—

1. The first cost of an iron vessel is from 15 to 20 per cent. less than a wood vessel.

2. The capacity of an iron vessel is much greater than that of a wood vessel of the same dimensions, in consequence of the less space occupied by the material; an iron vessel of 430 tons would present about the same internal surface as a vessel of 500 tons, built of wood.

3. The weight of an iron vessel is not more than two-thirds of that of a wood vessel of corresponding tonnage—hence the displacement of the iron vessel is much less; therefore the diminished power of her engines, and comparative quantity of fuel required, makes the combined displacement very much in favour of the iron steamer.

4. An iron steamer is of much greater durability, without the repairs rendered necessary by the common wear and tear of wood steamers. It was stated before the House of Commons, that an iron vessel had been worked for thirty-six years, and that an iron steamer had been constantly employed for sixteen years, and at the expiration of that time her bottom was examined and found free from oxidation, the outer scales and rust had disappeared, leaving the bottom perfectly smooth and clean. Now a wood vessel during that time would have required her copper to have been four times renewed, as often recaulked, paid, and painted, besides frequent and small repairs in repairing defective wood, and at the expiration of that time either condemned or thoroughly repaired, and if we add the value of the time required to effect such repairs, the economy of using iron steamers will be found enormous.

5. Perfect safety from fire is another of the great advantages to be realised by adopting iron steamers. The returns of steam vessels lost in one way or another, demonstrate that a great proportion of these losses have arisen from fire. It naturally follows that the premium of insurance would be much less for iron vessels than wood. The present custom is the use of wood beams and deck, but were it necessary for still further security, iron might be substituted with equal ease for both.

6. The danger of the vessel's sinking, by springing a leak, if not entirely obviated, is very much lessened. The facility of dividing an iron vessel's hold into departments by iron bulk-heads, which can be made as tight and as strong as a boiler, is very obvious; therefore, if a leak takes place in any one division, that division may be filled as high as the outer surface of the water, and the vessel be still comparatively secure. Moreover, a leak at sea on board an iron vessel, may be much more easily discovered than it could possibly be on board wood vessels, as it would not be hidden by a mass of timber. Another advantage would be perfect freedom from the smell of the engine room, which could not reach the cabins, and an entire absence of bilge water, so offensive on board all wood vessels. The plan of dividing the hold of wood vessels, by means of partitions, will, doubtless, answer some good purpose, but where so intense a heat exists as in the interior of a steamer, the wood must and will draw; this, added to the working of a wood vessel, would render it absolutely impossible to make the bulk-heads tight.

7. The danger from lightning is very much diminished, as the whole body of the vessel is a conductor of electricity. Lander's voyage to Africa in an iron steamer corroborates this fact, and I find the opinions of the most scientific men concur on this subject. The captain of a steam vessel, who commanded a steamer on the Mississippi more than twenty years, told me that he never knew a steamer to be struck with lightning when her engine was at work.

8. In tropical climates there is a great advantage in iron steamers, as the internal temperature of the hold would be very much cooled by the surrounding water, which would greatly add to the health and comfort of those on board. This result was also experienced on board the iron steamer already referred to, which went to Africa. Another advantage, which will be fully appreciated by those accustomed to voyages in tropical climates, is the entire freedom from insects and other animals which overrun wood vessels, forming, in frequent instances, a perfect barrier to all comfort.

9. Iron steamers are less exposed to accidents than wood steamers; if the latter, for instance, touches the ground but slightly and only to rub her copper, which is often the case, it is absolutely indispensable in tropical climates, to have it immediately replaced, or otherwise a few weeks will be sufficient for the worms to destroy that part of the bottom so exposed. The expense attendant even on such slight repairs, particularly in the absence of docks, would be immense. In an iron vessel, under the same circumstances, no difficulty would arise. Again, an iron vessel in striking a rock, would very likely suffer an indentation in her bottom, but it would not pass through the iron, when a wood plank, under similar circumstances, would, in all probability, be broken and rent. An iron vessel has been thrown on a ledge of rocks, and after beating on it for some time, was saved; it was found that the bottom was greatly bruised and indented, but still perfectly tight, and it was admitted by the spectators that a common wood vessel, under similar circumstances, would certainly have bilged and gone to pieces. The iron bottom presents a perfectly smooth surface, the heads of the rivets forming a plane with the plates.

10. It is, I believe, an understood principle, that superior buoyancy makes a superior sea-boat, and its application is strong proof in favour of iron vessels for steam purposes. We have the united testimony of many persons who have witnessed the operation of iron steamers in heavy weather, as to their great safety and security. It has been argued by some that this very buoyancy rendered them unfit for high sea use. This argument naturally carries one back to about twenty-five years since, when it was considered indispensable, that a vessel of 300 tons should draw seventeen or eighteen feet of water, to enable her to hold a good wind and make her safe in a sea way. At present the American packet ships of 700 to 800 tons, seldom draw, when in their best trim, more than thirteen feet of water.

11. It has been urged against iron steamers, that they are subject to extensive vibration by the action of the machinery. I was recently on board the *Rainbow* (an iron steamer of 198 feet length, 25 feet beam, and nearly of 600 tons), on an experimental trip from Blackwall to Gravesend and back. We had the full benefit of the tide down, and accomplished the distance in seventy-one and a half minutes, and allowing for a tide of three and a half miles per hour, we made fifteen and a half miles per hour through the water, working at a pressure of less than four pounds, with two ninety horse engines. The very slight vibration was a subject of general remark.

12. Another argument against iron steamers, is the difficulty of making them stiff. It seems very absurd to say than an iron form cannot be rendered equally stiff and firm as one of wood. An iron steamer is less likely to bend or hog than a wood steamer. The pressure is on the edge downwards, and it would be scarcely possible to produce such an effect, unless the iron be broken, for the rivetted part may be considered equally strong as, or even stronger, than the plate.

13. The construction of iron vessels can be rendered perfect only by practice, time, and experience. The drafts or models which I have seen, admit of many improvements, but as to their eventual general adoption I have no question. To many it appears such an innovation upon custom so long established, that it is condemned without cause or reason. I am perfectly persuaded that iron steam vessels can be navigated for one half the expense incurred at present in wood vessels. The opinions of the most practical and scientific men in the kingdom are universally in favour of iron as a substitute for wood in the building of steamers, both on account of its greater security, and durability, and also of its extraordinary economy.

Since the foregoing was written, I have received a report from the Seine respecting the iron steamer *Aaron Manby*—that she was in capital condition, very fast, and performed her voyages to the satisfaction of the proprietors; she has run twenty-one years without any signs of corrosion.

ORIGINAL CORRESPONDENCE.

ON THE VENTILATION OF COAL MINES.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—In reading your Journal this week, I find no less than three letters on the subject of ventilating and working coal mines. I have little to say in reference to the subject-matter of those letters, but I feel called upon to offer a few remarks upon that signed "James Morrison"—my friend and neighbour. Mr. Morrison says he is sorry I have left the subject where I found it—"unimproved by a suggestion of importance, or unaided by a single practical or theoretical illustration." I will not attempt to say how far he may be correct in this assertion—but the public shall judge between us on this score—but I will venture to observe, that I cannot but feel a little surprised that Mr. Morrison, with all his experience, should have followed so far in my wake, as the only difference that I can perceive in our relative statements are—that while I assert that the system of airing mines by a ventilating furnace, at every work I know, is practised—Mr. Morrison goes a little further, and declares it to be done in "every part of the kingdom." Hitherto I have had some slight doubts on this subject—not having had the advantage of seeing all "the works in the kingdom." So far I am enlightened by Mr. Morrison, and my scruples or doubts ought to be removed.

There is one suggestion thrown out by my friend, as to the necessary care in "'gobbing' up the wind roads which pass through the old workings." It has been generally deemed by the practical men with whom I have consulted, that rather the more preferable mode of the two is to carry the air-courses through the solid as much as possible—and upon that plan I have conducted the works under my care—and, from my late experience, I am inclined strongly to recommend it, in preference to that system of Mr. Morrison. I call it Mr. Morrison's system, as I find he has acted most extensively upon it in the management of a coal and mine work—in which I have just succeeded him—and I would beg to ask him, if he would indulge the public, as well as myself, with some remarks as to the best mode of executing this process, as I know of nothing, in the whole range of mining, that involves so much difficulty and danger, as properly securing the air-courses, after they have been torn and crushed to pieces by mismanagement and the work of inexperienced men.

I have to thank you, Mr. Editor, for your candid remarks upon Mr. Morrison's letter, as they have gone to some extent to remove the erroneous impression which his remarks were calculated to make, in reference to my opinion of working men. I can, perhaps, in fewer words, convince all of the feelings I entertain of that class, by saying, that I am not ashamed to confess—indeed, I feel proud to boast of it—that I am "from the ranks." I am proud to say that, by the indulgence and kindness of the iron masters of South Wales, that I am one of the "selected men." I have earned my living for years by the use of the mandril, and I can do so again.

I hope this short history of myself will be a sufficient explanation as to my opinion of the working men, and that I shall not be suspected of criminating my own class. The uneducated and inexperienced men that I complain of are those (to borrow Mr. Morrison's expressions) who *force* men to work in places in advance of the air-courses, and, consequently, expose them to much danger. I am sure you will agree with me, that regularly trained men, who have had the superintendence of collieries for years, and whose fortune is their character, are not likely men to *force* their fellow-creatures to work at any great distance beyond the air-courses for any length of time, knowing, as they must do, from their past experience, the consequences. They are more likely to adopt a regular and practical system—for one opening to follow the others so closely, as to keep the air traversing, as much as possible, to the back of the headings. It is when overlookers are employed—sometimes from the plough tail—sometimes wild speculators (of whom there are instances in this neighbourhood)—that the want of experience and education is evinced—and those are the men most apt to *force* the workmen into perilous situations.

I am, Sir, your obedient servant,

Pentwyn and Golpaun Iron Works, Oct. 1. J. CADMAN.

[The letter of our correspondent cannot be considered otherwise than highly creditable to him, in thus directing attention to the subject, by giving the result of his own observations, and his candid admission that he has been selected "from the ranks." We believe that both Mr. Morrison and Mr. Cadman mean the same, as regards the selection of viewers, and that one word of explanation will suffice. The one thinks it would be absurd to take the practical man, without he be somewhat educated, or possessing scientific knowledge—and the other, while he recommends a selection "from the ranks," would alone take those who evinced superior ability, and who might thus lay claim to being classed among the "educated" or experienced, and, therefore, possessing talent fitting for the occupation. We lament to have occasion to add our testimony to that of Mr. Cadman, as regards the appointment of overlookers, whether from the "plough tail" or "wild speculators." We have much in store on this subject, not confining our information to collieries.]

TIN TRADE—HIGHEST AND LOWEST PRICES OF BRITISH AND FOREIGN TIN FOR THE LAST TWENTY YEARS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I send you herewith a table of the highest and lowest prices of British and foreign tin for twenty years, and beg to call your attention to the statement of your correspondent, "Honestus," that the increase in the price of British tin "was the cause of the falling off in the foreign demand from 1834 to 1837," both inclusive.

You will find his statement to be quite wrong, inasmuch as in 1832 and 1833 the export of British tin was very large, being in those *two* years 2841 tons, whereas, in the *four* years he names, it was only 2273 tons—and in the *two* the price of English tin was as much *higher* than foreign as it was in the *four*. But, if you require a further proof of the attempt of "Honestus" to mislead us, you will find it in his own figures for the year 1838, when the export increased nearly 400 tons, and the price was 10s. per ton higher. "Honestus" must try again, this will never do!

I remain, Sir, your obedient servant,

London, October 7. M. J. M.

Years.	ENGLISH TIN. Highest.	Lowest.	FOREIGN TIN. Highest.	Lowest.
1820	76s	74s	78s	75s
1821	79s	75s	78s	74s
1822	92s	78s	93s	78s
1823	121s	93s	110s	90s
1824	98s	90s	99s	70s
1825	101s	98s	98s	88s
1826	82s	73s	80s	74s
1827	90s	75s	93s	72s
1828	75s	70s	74s	72s
1829	78s	72s	78s	70s
1830	75s	72s	76s	62s
1831	77s	72½s	65s	62s
1832	75½s	72½s	64s	55s
1833	75½s	72½s	62½s	56s
1834	81s	74s	61s	58s
1835	90s	82s	70s	58s
1836	129s	100s	126s	99s
1837	95s	80s	87½	73s
1838	92s	85s	87s	73s
1839	90s	78s	90s	72s

[Adhering to the determination expressed in our last Number, we shall reserve all comments on communications treating on the question between the tin miner and smelter until the discussion shall have been closed.]

TALACRE COAL AND IRON COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I have read with some surprise the observations which appeared in your paper of the 3d inst., on subject of the affairs of this company, in which you evince so much ignorance of the real state of things, that I am half led to suppose you have some covert object in view, in so putting the matter before the public as to lead to the impression that this 110,000*l.* went into the pockets of indifferent parties, or the vendors, as you term them; and that the question of the chairman and directors having pocketed any of the consideration money, or the shares, was a matter of doubt. Had you been a shareholder, signed the deed, and examined it *afterwards*, you would have found, Sir, that all is straight and above board—that certain of the directors—viz., Thomas Wood, Esq., Alderman of the City of London, William Hodges, Esq., Alderman of the City of Dublin, John Elliot Hyndman, Esq., also Alderman of the City of Dublin, Thomas Clouston, Esq., John Davis, Esq. (of West Cork notoriety), Thomas Pottinger, Esq., the worthy deputy (William Weston, Esq.), and — Jenkins, Esq., did, as appears by such deed, sell, assign, and transfer to the proprietors and shareholders of and in the Talacre Coal and Iron Company, all and singular, the advantages, benefits, and profits arising out of, or to arise from, the working of the several collieries, mine works, and other properties held and possessed by them, the said eight gentlemen, whose names I have recited from the deed. Is not this fair and straightforward dealing? That Mr. Alderman Wood, the worthy chairman, should have presided at public meetings, and used his best endeavours to get rid of the shares, and get them up to a premium, is, you must admit, highly praiseworthy in that gentleman, and deserves the grateful thanks of every proprietor, for, although the worthy alderman was not successful, such was not his fault, for I am informed, on unquestionable authority, that he did his best. I believe, Sir, that the deed will be found to be drawn with every regard to prolixity, and at a length which ought to satisfy any shareholder, and, if some of the clauses should be deemed objectionable by any of your correspondents (some of whom appear to me to be rather captious), it is their fault they did not read it before they attached their signature. I beg to thank you for the industry displayed in your Journal, and, in conclusion, have only to add, that when the worthy chairman becomes Lord Mayor, the Talacre coals will, doubtless, be introduced at the Mansion House.

I remain, Sir, your obedient servant,

October 7. CARBON.

[Our correspondent has let us into a secret, which we find confirmed in other quarters, viz., that the deed of settlement does actually recite the sale of the property from the chairman and half a-dozen other directors to the chairman and the shareholders at large, at no less a sum than 110,000*l.*—thus altering, we admit, very considerably the real position of the case and the view which we have heretofore taken of it, our observations being principally confined to the official documents issued by the directors. The case we consider to be of so aggravated a nature, that we have felt it our duty to make some observations, which will be found in another place. We guess that a "flare up" is likely to take place before the introduction of the coal at the Mansion House, and that the inquiry will benefit the public, in affording them a further opportunity of learning how things are done. Well may Mr. O'Connell exclaim against the "Union," and advocate "repeal," when we find the Aldermen of the two cities lending their humble aid to administer to the wants of the poor, by supplying coal at a low price, whose patriotism and humanity are best explained by their participation in the purchase-money.]

ON THE PRESENT MODE OF AIRING MINES.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The ventilating of collieries having been the subject of several letters in the last few Numbers of the *Mining Journal*, you will, perhaps, favour me by permitting a few observations to find room in your next paper; not that I have anything of moment to offer—in fact, as with Messrs. Dunn and Cadman, I shall be liable to Mr. James Morrison's censure, for not having elicited anything that is new, and shall leave the subject just where I found it—so, in all probability will every other writer, until an entire change takes place in the mode of airing mines; therefore, in the meanwhile, it is with the method as usually adopted that we have to deal, and if all who are in any way connected with the perilous operation of abstracting coal from beneath the surface of the earth, will only be at the trouble of occasionally making their ideas known, it is fair to hope that some benefit may ensue, because well intentioned and good-tempered discussion must produce increased knowledge if anything will.

With this system, then, of "pillar and stall," or, as it is termed in the north, "pillar and board," we must be content, until genius or science produces, as in the case of the safety lamp, a brilliant and valuable discovery. In speaking or writing on the present method, it is but fair to say that it is by no means a bad one, and in carrying it out the greatest possible attention must be given to all its details—to the furnace—to the capacity of the windways, or air-courses—to the air-tight and secure state of the gobbings, gangings, stoppings, or whatever they are locally termed; the state of repair of the doors will also require to be well looked after, and they should be attended or kept by boys that can be depended on; and these should be selected of a proper age, as there can be no doubt that accidents have arisen from the boys, or "trappers," having been of too tender an age to understand the dreadful consequences resulting from neglect of their charge. In a former communication to your Journal, I had occasion to remark on the vital necessity of the safety lamps being purchased from makers of known character and respectability, and they

should become the object of especial care afterwards, their condition, as regards security and cleanliness, being vigilently looked after. The density of the atmosphere also, is a feature of immense importance in ventilating collieries, therefore the barometer should be constantly consulted; and though last, by far the most important duty of the viewer, is the number of cubic feet of air per minute that should be made to traverse the works, for it must be generally acknowledged that in the quantity of air is found the security after all. Mr. Dunn states that 2520 cubic feet per minute may be found sufficient, and, generally speaking (although the quantity appears small), perhaps it may; but there can be no doubt that a much greater volume is very often required to render safe collieries liable to any extensive exudation of carburetted hydrogen gas; this point the master of a work should study most thoroughly. With regard to black or choke-damp, the method employed in sweeping out fire-damp by a powerful column of air, will also carry off carbonic acid or hydrogen gases; but it must be remembered, that a considerable volume of the atmosphere will be required for this purpose, as the specific gravity of the former (carbonic acid gas) is very great in comparison with all others.

Proper attention to all these duties, will, I think, show in a strong point of view, that Mr. Cadman was right in recommending the services of men of education and science, for however useful and well-conducted the overman selected from the working class may be, the scientific viewer will still be required, and when it is fairly considered how many lives are at stake, and how much valuable property, the necessity will strongly appear of appointing humane and intelligent mining engineers or viewers, who, from their education and habits of command, will efficiently keep up the discipline of a large body of men, and, by their skill and practical knowledge, will see that proper attention be paid by their overmen to the traverse of the air and the other imperative duties before alluded to. A colliery possessing such a viewer as the responsible officer, will have every reason to expect security and profit, and the men will have entire confidence in such an establishment; and here I may remark, that a good name to a work is of immense advantage to the proprietors.

In Mr. Cadman's letter (which does much credit both to his head and his heart) I cannot perceive that any reflections are thrown on the owners of collieries, as alleged by Mr. James Morrison; neither do I agree with him in his remark, that the best viewers and captains are selected from the ranks of the workmen, although I am happy to bear my testimony to the fact, that, occasionally, workmen have been found, who, by subsequent self-education and study, have rendered themselves eligible to fill situations of considerable responsibility.

The observation of your correspondent, that the most calamitous accidents by fire-damp too frequently occur through the negligence and carelessness of the operatives themselves, is quite correct, as all men engaged in subterranean pursuits must often have had occasion to remark on the indifference to danger manifested by the workmen themselves; and it is scarcely to be wondered at, for from childhood almost to the grave their working hours are spent underground, and, from constant exposure, they become so familiar with danger as entirely to disregard it.

In conclusion, I beg to observe, that from the manner in which your correspondent, "X.," recommends deal bratticing, I should imagine he is not aware that the use of this adjunct is well known, far and wide, and often employed. Another writer on this subject speaks of bellows—he might as well attempt to propel a line-of-battle ship with a lady's fan.

I remain, Sir, your obedient servant,

Neath, Glamorganshire, Sept. 30. LIONEL BROUGH.

[We fully concur in the view taken by our correspondent, that science is required on the part of viewers, but which we considered the more important when blended with practical knowledge and experience, as is to be found in many cases, and we may with confidence refer to two of our correspondents —Mr. Dunn and Mr. Cadman—as combining those qualifications. There are too many instances (as Mr. Cadman, in his letter, very properly observes) of men possessing neither science nor practical experience, whether "taken from the ranks," or educated, being appointed to the management of coal works—some lawyers, others "gentlemen," as they would wish to be considered, whose hands have never been subjected to the indignity of handling a rope, or clasping the round of a ladder, and yet on whom devolves the main appointments of underground bailiffs, of whose competence they are totally incapable of forming an estimate. The several points treated on in Mr. Brough's letter at once prove the necessity of the viewer being practically acquainted with underground operations, and, although, as that gentleman states, the workmen, generally speaking, have spent the greater part of their time in "subterranean pursuits," and thus have become familiarised with danger, so as not to act with necessary caution, yet, it must be admitted that, while this applies to the working collier, it cannot be said to have any application to the underground bailiff or superintendent, whose duty it is, both to his employer and to the men put under his command, to see that the coal is not only fairly worked, but the power being vested in him of giving directions for the operations underground, and on whom, indeed, the responsibility devolves, it is naturally to be supposed that he will direct his best attentions and abilities to the prevention of those accidents which have led to the present discussion. We perfectly agree with Mr. Brough, that if practical men will only contribute their mite by way of information, with any suggestions which may arise in their minds, much good must attend the discussion of the question.]

THE TIN QUESTION—MINERS VERSUS SMELTERS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—"Honestus!"—save the mark! It would puzzle a conjuror to discover an affinity between the assumed name and he who assumes it: however, as he will not give an opportunity to be addressed by any other, we must e'en take what he gives. "Honesty," indeed! So, he has become angry, and uses hard words—a sure sign that he thinks his clients (the smelters) are losing ground; but he must not be permitted to be imprudent with impunity. Who is he that has undertaken a defence so desperate, and strained his ingenuity to distort, pervert, and mystify a very plain case? I am obliged to guess, and to invest him with various characters, in the hope that some one may fit him. Is he some poor unfortunate wight of an author, who, in the hope of a new hat and coat, and a five pound note at Christmas, lends himself to whatever he is required to do? Is it that

"His poverty, and not his will, consents;"

If so, and he will henceforth follow the right path, and adopt the maxim, that "honesty is the best policy," I will endeavour to improve his condition, either here or in Cornwall; but he must use his industry and perseverance to better purpose, and not "cudgel his brains" to produce such an overwhelming torrent of rapid stuff, having no connection with the points at issue. He must, moreover, try to behave himself as a gentleman, which, I fear, will be the hardest part of his task.

If he is not unfortunate, but is one whose base soul is so sunk, that he revels with delight in such cases as others would throw up in disgust—one who, from long practice in making his acts conform to what he thinks his interest, either present or in perspective, has become

"Paltry and pitiful, scurvy and mean,
The mire-dingiest scoundrel that ever was seen,"

then is he entitled only to unmitigated contempt and loathing. But there is another hypothesis. I figure him to myself as one to whom the inconsistency and shuffling at the Charlestown meeting may be traced,

"Some busy and insinuating rogue,
Some cogging, cozening slave, to get some office."

This would solve the difficulty in accounting for the truckling and support to the very men who have inflicted an injury never to be forgotten, if forgiven—wounded pride retaining longer the keen feeling of suffering than that arising from pecuniary loss. If he is the cause of such degradation, and, through the influence of those parties, is, moreover, the cause of mischief to thousands of his fellow-beings, then may we exclaim—

"Oh, Heaven!—that such companions thou'dst unfold,
And put in every honest hand a whip,
To lash the rascal through the Cornish world—
Even from the east to the west."

But, whether any part of what precedes fit him or not, why is he so absurd as to incur the risk of compelling me to show his clients as they are, or some of them, by entering into detail? I apprehend that his folly will cause his expected Christmas reward to vanish.

I had put these details upon paper, but, at the request of a Cornish friend, I keep them back, for, unfortunately, they are too true—too well known in the county, and would give pain, which it is not my wish to inflict; but, if "Honestus" comes forward again in the style of his last letter, as a violent partisan, and is abusive, I will not suppress them. They will give a reply to his remark, relative to the public meeting at Helston, that "such statements may serve the purpose, when addressed to a meeting of persons *predetermined* to believe all that might be advanced in support of their own *prejudiced* views," inasmuch as they will show the conduct which produced such indignation, and consequent unanimity at so numerous a meeting, consisting, as it did, of mine owners, miners, mine agents, bankers, lawyers, and men of business, having a very large mining property at stake.

Does "Honestus" suppose that a mere stranger could have caused such an effect, or that the mining interest was ripe for the new measure proposed, roused to a determination to effect a change, by the oppression and insolence of the smelters and their servants? He knows that the latter was the case—therefore, the more disgraceful his attempt to defend them. Let him apply his remark to his friend Mr. Richard Taylor, and party, at the Charlestown meeting; there he will, indeed, find that *it was predetermined to support their own prejudiced views*, and, I fear, something worse.

I am much obliged to him for his recommendation to go underground, and take a pitch, but must decline it, as I should make a bad workman, not being a proficient in underground or "underhand" work, as he evidently is; yet, in return for his kindness, I cannot do less than advise him to follow his own recommendation, and take his friends and clients with him—to the lowest levels of "Wheal Vor," for instance, as they will there learn the slavery of a miner to earn ten or twelve shillings a-week to support himself and family. This lesson may produce repentance, and enable them all to avoid that lower pitch hereafter, where

"Fraud skulks below with all her various brood,
There darkling dwell the foes of public good,
The pilf'rer, and the cheat, his dark ally;
With those, whose felon hand their trust betray'd,
Hypocrisy in saintly garb array'd,
Corruption fool and frontless perjury."

I remain, Sir, your obedient servant,

October 5. A TIN MINER.

THE TIN QUESTION—QUANTITY OF TIN RAISED.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—In reply to the letter of "J. J.," of the 29th ult., I must leave it to the present proprietor of "Grylls Mining Sheet" to support the accuracy of that publication, which has been received for years as correct, both as regards tin and copper. I was informed at Redruth that Mr. Gryll was acquainted with Mr. Henwood, the officer of the Duchy of Cornwall, and made up his returns from the official papers—my impression, therefore, is, that any apparent inaccuracy can be easily explained.

I do not know of any account published by Mr. Carne, respecting the proportion of private sales, but I know what he stated was, that the proportion was as 18 to 50 upon the whole produce of the county of Cornwall, therefore, as he made no exception of "Wheal Vor," and as the result arrived at by him was, as he said, from an average of years—the evidence to show the whole annual produce being the coinage returns, which includes that mine—I could not, and cannot, attach any other meaning to his words than I have done, especially as the same conclusion was come to by another person, much more versed in these matters than I am, who, within a very short time of leaving Mr. Carne, made an estimate very nearly agreeing with mine.

It would be hardly fair, I think, under such circumstances, to require me to admit the addition of the produce of "Wheal Vor," to swell the amount of the whole produce of the county, so as to make out my adversary's case upon this point, but, as I candidly named the evidence in support of my estimates, I am ready to investigate any other that "J. J." can point out to me. My object is to arrive at the truth, but, as the matter is of some importance, I hope "J. J." will excuse me if I am somewhat tenacious about it, and require better authority than he dissents from before I can allow that I am in error.

I have inquired of several of the most practical men in Cornwall, and they contend that the produce has not increased since the last year of coinage, nor is increasing, although some three or four of the larger mines may be raising more, it being a fact, they say, that many smaller ones have stopped altogether. I know one practical miner who made out a list to the extent of fifty tons per month diminution in his own immediate neighbourhood.

Such statements are entitled to some consideration, but I do not produce them as evidence, inasmuch as my opponents would say it is the miners' interest that the produce should be believed to be less than it is.

Then, how to arrive at a solution? I do not know, unless by taking the trouble of comparing the produce of all the principal mines before and since the cessation of the "coinage," up to the end of May last, and by obtaining an accurate return of the "farthing" duty since its commencement. But, after all, be the produce more, or be it less, what we complain of is the mismanagement of it by the smelters, in their double capacity of smelters and merchants, and that we miners have been the victims; therefore, the opportunity having been given to us, we intend to try whether we can better ourselves by smelting and selling our own produce through our own agents. Is there anything so extraordinary or wrong in this, to cause such a storm among those smelters who have so long ridden rough shod over us? The more inveterate they are against us, the stronger reason is there for us to persevere in our present course.

I remain, Sir, your obedient servant,

October 6. A TIN MINER.

P.S.—I have just now seen the circular of a metal broker, of this date, in which he quotes the prices of "common" blocks 84*l*s. to 85*l*s. per cwt., 3½ per cent. discount, and says—"English tin has been in great demand, at advanced prices—the market has been cleared at 83*l*s. 6d., and holders now refuse to sell under 85*l*s. per cwt." What has become of the enormous stock of 16,000 or 17,000 blocks which Mr. Richard Taylor held up as a "bug-bear" at the Charlestown meeting about two short months since?

THE WICKLOW HILLS.—MINERAL DEPOSITS.

BY JOSHUA ABELL.

Within a few months after the quarrel took place with Naples about her sulphur, vast depositories of that useful combustible were discovered in the Avoca mountains, which, probably will be found sufficient to supply the whole demand for the British Empire. It is combined with iron, and is also called iron pyrites or mundic, but is not in a volcanic state. At present I believe that it supplies one-third of the demand, which may be about 90,000 tons annually, of pure sulphur; and when the works shall be extended, I think that it can supply the whole. Such depositories of sulphur will readily take fire at the increased temperature of the earth as we descend, and easily account for volcanic eruptions which cause such tremendous catastrophes. Nor need we wonder at such an event, when for every fifty feet which we descend, the thermometer rises 1 degree on an average; so that, allowing 60 degrees as the mean temperature at the surface, and multiplying the remaining 152 (which remains up to 212, the heat of boiling water) by fifty feet, we shall have 7600 feet, at which depth all the water in the earth is supposed to be boiling. The French Government has caused an opening to be made near Paris, at present I believe between 2000 and 3000 feet deep, on their way down to solve the problem. Below the depth of 7600 feet must exist an eternal fire. After leaving Arklow, I proceeded to the wooden bridge in the Vale of Avoca, and thence to the region of the gold mines, which are now being worked on trial. Government has granted all the gold which may be found there to a company for twenty-one years, and this is the commencement. There are fifty men at work in two or three ravines, where a great flood evidently once swept down the gold, mingled with rocks, pebbles, and clay. The source whence it came is probably in this district. It is found purest and generally flattened amongst the debris. On examining with a microscope the sand left in the bowls after washing, I found it to consist of gold dust in particles so small that the eye could not detect some of them, crystals of transparent quartz, tourmalines, and many other curious stones, together with what appears to be grain tin. In every bowl which I examined there were several grains of metallic shot, coated with an oxide, showing that the sportsman considers this a favourite mountain. In a working commenced only three days before, a piece worth 15*l*. was found. I had a piece which was found here some time since, weighing eighteen sovereigns. About 10,000*l*. worth of gold was found in the ravines by the peasants, in the first two months after the discovery; and during the short time that the Government worked them, about 3700*l*. worth was obtained. I visited all the mines in this district, and at Connorree obtained some specimens of beautiful pure copper, deposited by the water on old pieces of iron, previously put in for this purpose. The iron is generally dissolved, leaving an incrustation of metallic copper of the same shape as the original iron. I got one shaped like a bell; also some well shaped crystals of sulphate of copper, deposited by the water. The miners in the glen do not possess as many good specimens as formerly. I obtained one fine piece of crystalised phosphate of lead, and some amorphous quartz.

PROTECTION OF IRON FROM RUSTING BY ZINC.—M. de Althans, director of the salt-works at Durrenberg, has succeeded in completely protecting the evaporating boilers of the salt water, which are thirty feet long, from oxidation, by fastening bands of zinc on the outside. He has observed also, that it is not necessary that the two metals should be polished at the points of contact. This fact, which he has established by more than ten years' experience, seems completely to verify the theory of contact.

ON THE PROPERTIES AND CHEMICAL CONSTITUTION OF COAL,

WITH REMARKS ON THE METHODS OF INCREASING ITS CALORIFIC EFFECT, AND PREVENTING THE LOSS WHICH OCCURS DURING ITS COMBUSTION.

BY CHARLES HOOD, F.R.A.S., &c.

[From the "Transactions of the Institution of Civil Engineers."

It appears that, previous even to the invasion of the Romans, coal was used as a fuel in Great Britain; but such was the prejudice against it, that wood was the fuel generally in use among the higher classes until the eighteenth century, when the supply of it diminished so considerably as to render necessary the substitution of coal; and from that time the increase in its consumption has been immense.

Previously to the seventeenth century the smelting of iron, and all other metals, was performed by charcoal; but the attempts of Sturtevant and Ravenson, in 1612-13, and of Dudley, in 1619, to introduce the use of coal or coke in blast furnaces, having proved the possibility of success, the progress of the innovation, though slow, was certain, and led to the transfer of the iron works from many of the original positions in the midst of forests to the coal districts where they are now placed.

The author considers his subject under three heads:—1st. The chemical character and composition of coal; 2d. Its properties as a combustible; 3d. The nature and application of its various gaseous products.

1st. The opinion that coal is a compound of carbon and bitumen has been objected to by some chemists, on the ground that by no process hitherto pursued in analyses has it been possible to resolve it entirely into these two substances: even at a low temperature a quantity of gaseous matter is thrown off, and at an elevated degree of heat an evident decomposition of the bitumen takes place. Even anthracite contains a small portion of volatile matter—its component parts being carbon, oxygen, hydrogen, and nitrogen; the hydrogen being either combined with the oxygen to form water, or with a small portion of carbon to form carburetted hydrogen, which exists in a gaseous state in the pores of the coal. In bituminous coal the hydrogen is combined with a larger proportion of oxygen and nitrogen; the mechanical difference being, that the bituminous and free-burning coals (more particularly) melt by heat when the bitumen reaches the boiling point, whereas anthracite is not fusible, nor will it change its form, until it is exposed to a much higher degree of temperature.

Two tables of the analyses of different coals are given, from the authorities of Mushet, Thomson, Vauxem, Daniells, Ure, and Reynault; No. 1, showing the proportions of carbon, ashes, and volatile matter, with the specific gravity of the coal and of the coke; and No. 2, showing the proportions of carbon, hydrogen, azote, and oxygen. These tables show that the largest quantity of carbon (92·87) is contained in the Kilkenny anthracite, and the least quantity (64·72) in Cannel coal; and that the nature of the volatile matter greatly affects the quantity of coke—the aggregate quantity of the gaseous products of coking, splint, and cherry coal, being very nearly similar; while the quantity of coke obtained from these different species varies more than 45 per cent.

The author then points out the continual presence of azote, which quits the base with the greatest difficulty; and also the affinity of sulphur, not only for the coal, but for the coke, as it is rarely found to have been completely expelled even from the most perfectly-made coke; the only coal found to be even partially free from it being anthracite, in some species of which no traces of its presence are found.

2d. The application of coal as a fuel depends on the chemical change which it undergoes in uniting, by the agency of heat, with some body for which it possesses a powerful affinity. In all ordinary cases this effect is produced by its union with oxygen. When coal is entirely consumed, the carbon is wholly converted into carbonic acid gas and carbonic oxide, and the hydrogen into water in a state of vapour. The atmosphere supplies the necessary oxygen for this purpose; and in this state the products of the combination are nearly, or quite, invisible, both of them being almost colourless fluids: if, therefore, any smoke be visible, it is the result of imperfect combustion. Some calculations are given to ascertain the amount of loss that is sustained when the smoke escapes unconsumed; from which it appears that, with bituminous coal, about 37 or 38 per cent. more heat is produced when the smoke is consumed than when it escapes freely. Many modes of consuming smoke have been attempted; those which appear to have been attented with the greatest success are—1st. Causing the smoke from the fresh coals to pass through or over that portion of the fuel which is more perfectly ignited; 2d. Supplying heated air to the top of the fuel, as well as admitting cold air through the ash-pit in the usual manner; and, 3d. Throwing a jet of steam into the furnace or into the chimney. The various modes of carrying into effect these plans are briefly alluded to; from them a few may be selected. Robertson's plan was to use inclined furnace bars, where the fresh coals were placed close to the fire door, and being there partially carbonised, gave out the gas, which, in passing over the mass of incandescent fuel, was ignited, and became retive flame—thus economising fuel and preventing smoke. In this, and similar cases, by the slow distillation of the coal, a gas is produced, which not only inflames at a lower temperature than the dense olefiant gas produced by rapid distillation, but which only requires for its combustion a quantity of oxygen, never exceeding double its own volume, or ten times its bulk of atmospheric air, while olefiant gas requires three times its own volume of oxygen, or fifteen times its bulk of atmospheric air. The elimination of a gas which burns with so small a portion of oxygen is, therefore, the principal cause of the non-production of smoke in furnaces of this description. The second mode of consuming smoke is founded on the necessity which exists for a large supply of air being requisite to inflame the gases given off from coal by a rapid and intense heat; and this is accomplished by introducing a quantity of heated air above the burning fuel. When a quantity of fuel is thrown into a furnace, the increased thickness of the mass opposes additional resistance to the passage of air through the bars; the temperature of the furnace is lowered, and an increased volume of gas is at the same time given out. If at this moment a quantity of air, heated to the temperature of the gas, be admitted, the gas immediately inflames, and that which would have produced a dense black smoke passes off in the invisible state of carbonic acid gas and vapour of water. Different gases require different degrees of heat to inflame them; and this explains the easy combustibility of the volatile products of coal when the heat is so managed as to produce those gases which inflame at the lowest temperature. A larger quantity of air is required at the time that the coal is first thrown on than at a subsequent period; therefore, when economy is studied, the supply of air should be gradually diminished as the mass approaches an incandescent state. The use of heated air has produced most important results in the manufacture of iron with bituminous coal, and also with anthracite; the latter fuel having been almost neglected until the recent application of this principle of employing heated air to promote its combustion, although it is known to be capable of producing, perhaps, a more intense heat than any other carbonaceous fuel. The *rationale* of the third plan, of consuming smoke by injecting a jet of steam into the fire or the chimney, is less obvious than the others. In 1808, Mr. Davies Gilbert observed, that whenever the waste steam of one of Trevithick's engines was permitted to escape into the chimney, the smoke from the coal was rendered invisible. Subsequent experiments confirmed this fact; and it was supposed that the steam, being decomposed, furnished oxygen to support combustion. The author combats this opinion, and accounts for the effect by the increased draught of the furnace, caused by the jet of steam into the chimney, by which means a larger portion of air is brought into contact with the burning fuel; thus supplying the previous deficiency of oxygen to the fire, and promoting the combustion. As steam is only about half the weight of air at a like temperature, and the power of all gaseous fluids to ascend is "*inversely* as the square roots of their specific gravities," the velocity of its escape by the chimney, compared with common air of the same temperature, is about as 1·4 to 1; therefore, the compound mixture of steam, air, and carbonic acid gas, will escape with a considerably increased velocity, and more air must, consequently, enter the furnace. It appears that about 10 per cent. of the total quantity of steam generated is necessary to effect the combustion of the smoke by this means; therefore, unless the waste steam only be used, the saving of the fuel must be reduced by this amount. Brief mention is made of the experiments of Messrs. Apsley Pellatt, Parkes, and the Chevalier de Pambour, proving that a given quantity of oven coke will produce as much heat as the coal from which it was produced; and of the various kinds of artificial fuels which have been invented, especially that composed of resin and peat coke, of which the author remarks that its combustion probably produces a mechanical effect, as the hydrogen is converted into water in a state of vapour, which escapes through the chimney with a great velocity, and consequently a large quantity of air is drawn into the furnace, and a more perfect combustion of the fuel is the result. In the same manner he accounts for the necessity which exists for having the openings between the bars wider in a furnace in which coke is burned than in one used for coal. In opposition to the general opinion, he considers that less air is required for the consumption of coke than for coal; the carbon only requiring 2½ times its weight of oxygen for its combustion, while the hydrogen contained in coal requires eight times its weight of oxygen; and the only reason that the openings between the bars are required to be wider in the former than in the latter case, is in consequence of the draught being so much slower during the combustion of coke.

3. "On the nature and application of the volatile products of coal." In treating this portion of the subject—many of the observations on which have been necessarily anticipated in the preceding sections—the author traces the application of carburetted hydrogen gas to the purposes of artificial illumination from the year 1798, when its first successful application was made by Murdoch at Soho; he then proceeds to Dr. Henry's investigations of the phenomena of its production and combustion; the variation of the intensity of light obtained from carburetted hydrogen, due to the proportion of carbon

contained in it; the difference in the gas obtained from different qualities of coal; the superiority of the illuminating power of the gas from cannel coal; and the still greater power of that produced from the decomposition of oil, which is 2 to 2½ times greater than that of coal gas. He then mentions the other products of coal by distillation, such as ammoniacal liquor; carbonic acid and oxide, sulphuretted hydrogen, tar, essential oil, naptha, petroleum, asphaltum, and other substances. The paper concludes by pointing out the advantages which would result from the production of such gas as is usually given out at the beginning of the distillation of coal, as it contains two volumes of gaseous carbon united with two volumes of hydrogen, and its illuminating power is consequently more than double that of ordinary coal gas.

Mr. Parkes observed, that the quantities of air required for the combustion of different fuels as determined in the laboratory and on the large scale of practice, were frequently very different. It might be quite correct that a given weight of coal would require more air for its perfect combustion than the same weight of coke. There was great difficulty in ascertaining the fact practically, under steam boilers, as the gases given out by the coal must have air supplied to them distinct from that which passed through the grate to ensure their perfect ignition, and many circumstances prevented the consumption of air from being exactly measured. Generally, he had found it necessary to use wider spaces between the grate bars for coke than for coal. In some late experiments very carefully made on a boiler invented by Mr. A. M. Perkins, equal weights of coal and coke required the same time for their destruction on the same grate, the apertures of the damper and ash-pit door, which were used to govern the draught, being precisely the same. Coke effected a greater evaporation than coal at similarly rapid and slow rates of combustion; and in every case the temperature of an oil bath at the foot of the chimney was higher with coke than with coal. It must, however, be remarked, that no process had been used to ignite the gases which escaped from the furnace uninflamed. He had tried different kinds of coke, coal, and anthracite at this boiler, and the same fuel in every instance performed a greater evaporative effect at a slow than at a rapid rate of combustion. He thought that much of the air which entered the grate of a boiler passed through the fire unconsumed, for want of time to effect a sufficiently intimate combination with the fuel. In some experiments lately made at Swansea on the properties of anthracite, Dr. Schafheutl had found from analysis, that no less than 40 per cent. of the products of combustion taken from the chimney consisted of oxygen, yet he had effected the large evaporation of 11 lbs. of water with 1 lb. of that fuel.

Mr. Field stated, that Mr. Cooper had expressed an opinion that in the use of coke as a fuel, a less portion of heat reached the chimney than with coal, on account of the large quantity of unconsumed air that passed through the fire, owing to the open spaces necessarily existing between the pieces of such a dry fuel as coke; whereas in a fire made of binding coal, nearly the whole of the air combined with the fuel in its passage through the body of fire.

Mr. Pellatt observed, that although in practice coke appeared to require more air to support combustion than coal did, yet long experience had taught him to believe that when coal was exposed to a rapid combustion, it required more air than coke.

In answer to an observation that some experiments lately made on the measurement of the quantity of air which entered the blast furnaces of Sir John Guest at the Dowlais Iron Works might bear on this subject—Mr. Farey objected to the application of such results to determine the question, as the air is injected with considerable force into a furnace; there is frequently a great reflux of blast from the tuyere when the furnace is working close; whereas when it is working open the flame at the top shows that the passage of the air through the mass of burning fuel is very free, and that consequently a portion of it passes off unconsumed. He had found in his experiments on blast furnaces, that unless there was a redundancy of carbon, and a deficiency of oxygen, there was no chance of making good iron.

STEAM COMMUNICATION WITH INDIA.

[From the *Indian News.*]

The steam question has been again brought before the public at Calcutta, at a meeting convened expressly to receive and consider the communications which left London on the 4th of June, to which considerable importance was attached, as they comprised the specific modifications and resolutions adopted by the board of directors of the East India Steam Navigation Company, in the confident expectation of thereby uniting all interests in India in the common cause.

The result of this meeting, which was held on the 1st of August, may be briefly told. After an ineffectual attempt on the part of Messrs. Turton, Grant, Bushby, and Colquhoun, the agitators of the Precursor Scheme, to repudiate the measures which were submitted, under the plea of their not being sufficiently specific, resolutions were passed, acknowledging in the strongest terms, the judgment, patience, and consideration, which the proceedings of the London board evinced—expressing the fullest confidence in the directors—and authorising the immediate appropriation of all the funds which had been previously remitted. They farther intimated that an union of the principal parties had taken place, from which a vast accession of subscribers might be expected, and recommended the purchase or hire of a steamer, to occupy the line between Suez and Calcutta (a measure which had been already anticipated, as the *India* steamer left Plymouth full of passengers, for Calcutta, for this purpose), and the immediate supply of fuel for the depôts.

The unequivocal and universal expression of opinion upon the question induced the withdrawal from the chair of Mr. Turton, who with Messrs. Grant and Colquhoun, retired from the committee.

The official letters also announce the union of parties, and remit a further sum of 7000*l*., on account of subscriptions to Mr. Curtis's company; with the intimation on the part of no less than seventy of the principal firms, whose names are attached to a resolution that they pledge themselves to support Mr. Curtis, to the fullest extent in their power, in carrying out that which they believe will be the only measure of real and permanent benefit to the interests of all India.

[From the *Times.*]

In several of the Indian papers of the last arrival, the question of steam communication with England is discussed with a great deal of attention, with regard to the views of the Eastern Steam Navigation Company and the East India Steam Navigation Company, or, as they call them, the "Comprehensives" and the "Precursors." The difference between the parties consisted, it is known, in the opposition of opinions with respect to the completion of the European line, the "Precursors" proposing a clause by which the united companies should have the option of embarking their funds or not in the European line, after the arrangements for the Eastern line had been completed, while the "Comprehensives" were against the clause, on the ground that the English public would not subscribe to the scheme if the European line were not embraced in it. It having appeared, by Mr. Curtis's letter, that the "Comprehensives" had become "Precursors," by agreeing to complete the Suez side of the communication before commencing the other, and also to the Calcutta direction, it is contended on one side that no more should be asked, but other parties object to an ambiguity in the letter itself. The agreement by the directors to give immediate attention to the commencement of the communication between Calcutta, Madras, Ceylon, and Suez, leaving the European line untouched till the completion of the Indian line, was considered satisfactory if it had stopped there; but the further part of the agreement was held to render this first part doubtful. According to this, a steamboat of sufficient size was to be sent at once to Calcutta to perform four voyages a year, and the rest of the vessels for a monthly communication between Calcutta and Europe. This was held by the objecting party to mean that the people in India were to be satisfied with one vessel for a year, and that the rest were only to be completed with the European line. On the other hand, it is argued that this specification of four voyages in a year does not warrant any such conclusion, but merely states what the first vessel would have to do till the others were sent out. The Calcutta United Committee met lately, and approved of Mr. Curtis's letter, voting his committee thanks, confidence, and money, but at the same time entreated him not to embark on the Mediterranean unless it clearly appeared expedient. Hence it is thought that the London "Precursors" and this committee both agree with respect to the Mediterranean, with the exception that one would render the adoption of the scheme optional, and the other stipulate against it. Under these circumstances, unity of purpose, which must be the great object of all these parties, seems to be placed at a greater distance than ever.

Exportation of the Precious Metals.—The exportation of the precious metals from the port of London to foreign ports for the week ending the 1st inst., was as follows:—Silver coin to Hamburgh, 92,000 oz.; Rotterdam, 41,000 oz.; Belgium, 6000 oz.—Gold coin to British West Indies, 300 oz.—Gold coin shipped at Dover since last account to the 5th inst., 33,785 oz.—Silver coin and bullion, 232,000 oz.

Coal.—The extraordinary amount of 68,628 tons of coal was brought down the Monmouthshire tramroad during the past month of September.

Zinc.—We understand the consumption of zinc in France has doubled within four years.

Indian Banks.—A return of the accounts of the Bombay and Agra banks to the 30th of June last, published in the Indian papers, shows that the actual profit of the former, amounting to 10,099 rupees, has been appropriated by the directors to the liquidation of the preliminary expenses, while the divisible surplus of the latter is 106,786 rupees, and a dividend of 11 per cent. has been paid.

PURCHASES OF COPPER ORES AT POOL,

October 1.

Purchasers.	Mines.	Tons	Total	Price. £ s. d.	Each Parcel. £ s. d.	Total Amount. £ s. d.
1. Mines Royal Co.	East Pool	17		9 18 0	168 6 0	
—	United Hills	69		4 4 0	289 16 0	
—	....	37		11 5 6	417 3 6	
—	Francis's Ore	65		4 11 6	297 7 6	
—	South Wl. Basset	7		5 16 6	40 15 6	
—	Carzise Consols	13		8 14 6	113 8 6	
—	West Wh. Jewel	8		15 4 6	121 16 0	
			216			1443 13 0
2. English Copper Co.	United Hills	..		4 14 0	....	
			16			75 4 0
3. Vivian and Sons.	East Wl. Crofty	98		4 7 6	426 0 0	
—	....	45		1 16 6	82 2 6	
—	....	51		2 5 0	114 15 0	
—	East Pool	90		5 15 0	517 10 0	
—	United Hills	65		4 7 0	282 2 0	
—	....	59		4 7 0	256 13 0	
—	....	16		4 14 0	75 4 0	
—	....	30		3 2 0	93 0 0	
—	Dolcoath	57		3 8 6	195 4 6	
—	Fowey Consols	103		5 16 0	599 19 6	
—	....	61		5 12 6	343 2 6	
—	Gt. Wh. Charlotte	23		3 7 6	77 12 6	
—	....	30½		2 6 0	70 3 0	
—	Wheal Harriet	7		7 4 0	48 0 0	
—	Carzise	14		3 5 6	45 17 0	
			788½			3451 5 6
4. Freeman and Co.	East Pool	58½		6 11 0	383 3 6	
—	Francis's Ore	99		1 18 0	188 2 0	
—	....	59		2 14 0	165 6 0	
—	Wheal Harriet	7		7 4 0	48 0 0	
—	Carzise	59		7 4 0	424 16 0	
			262½			1149 7 6
5. Grenfell and Sons.	East Wl. Crofty	111		5 3 6	574 8 6	
—	....	85		4 18 6	418 12 6	
—	....	45		1 16 6	82 2 6	
—	....	75		5 6 0	397 10 0	
—	....	67		4 18 6	329 19 6	
—	....	56		4 6 6	242 4 0	
—	Longclose	95		5 8 0	502 4 0	
—	East Pool	17		9 18 0	168 6 0	
—	....	50		4 5 0	212 10 0	
—	Dolcoath	75		5 9 0	408 15 0	
—	Trethellan	71		3 18 0	276 18 0	
—	....	78		4 16 6	376 7 0	
—	Stray Park	45		8 18 6	401 12 6	
—	....	34		5 5 6	179 7 0	
—	Cuddra	21		2 10 0	55 0 0	
—	....	20		0 10 6	10 10 0	
			944			4026 6 6
6. Sims, Williams, Nevill, and Co.	East Wl. Crofty	94		7 3 0	672 2 0	
—	....	49		10 7 6	508 7 6	
—	Dolcoath	53		8 11 6	454 9 6	
—	....	30		2 3 0	64 10 0	
—	Tretoil	52		4 9 6	232 14 0	
—	....	42		6 16 6	286 13 0	
—	....	38		4 4 0	159 12 0	
—	Gt. Wh. Charlotte	69		4 16 6	332 18 6	
			427			2711 6 6
7. Williams and Co.	East Wl. Crofty	20		1 1 0	21 0 0	
—	East Pool	58½		6 11 0	383 3 6	
—	....	17½		9 18 0	168 6 0	
—	Tretoil	73		9 14 0	708 2 0	
—	Gt. Wh. Charlotte	30½		2 6 0	70 3 0	
—	South Wl. Basset	86		9 0 0	774 0 0	
—	....	52		4 10 0	234 0 0	
—	Stray Park	56		7 11 0	422 16 0	
—	Wheal Harriet	57		5 0 0	285 0 0	
—	....	21		5 3 0	108 3 0	
—	....	7		7 4 0	48 0 0	
—	West Wh. Jewel	73		8 5 6	604 1 6	
—	Treleigh Consols	63		5 2 0	321 6 0	
—	Wheal Sparrow	18		5 15 0	103 10 0	
			632			4352 19 6
			3286			17725 2 6

SALE OF COPPER ORES AT SWANSEA.

Sampled Sept. 16th, and sold at Swansea on the 7th October.

Mines	Tons	Produce	Stand.	Price	Mines	Tons	Produce	Stand.	Price
Cobre	143	15	99	12 12 0	Copiapo	100	22¾	96¼	19 11 6
ditto	80	14¾	100¼	12 12 0	ditto	44	22½	99¼	20 8 6
ditto	40	14¾	100¾	12 12 0	ditto	5	45½	97	40 0 0
ditto	70	24	98¼	21 7 0	ditto	1		[withdrawn]	
ditto	64	25¼	95¾	21 19 0	Cosheen	80	10¾	107¼	9 3 6
ditto	52	25¾	95¼	21 16 6	ditto	46	10¾	109¼	9 7 0
ditto	48	28¾	97¼	25 2 0	Allihies	124	10	110¼	8 16 0
Knockmahon	134	11¾	108¼	9 18 6	ditto	90	10¾	110	9 11 6
ditto	119	12¾	107	11 5 6	Lackamore	72	12¾	107½	10 18 0
ditto	116	5¼	120¼	4 1 6	Tigrony	26	4	131¼	5 0 0
ditto	100	9¼	111¼	8 15 0	ditto	25	5	126	2 2 6
ditto	12	9¾	110	8 9 6	Cronebane	25	3¼	143¼	2 4 6
Chili	100	21¾	98	18 7 0	Connorree	40	8¾	135¾	2 19 0
ditto	96	19¾	97¾	17 1 6	ditto	8		[withdrawn]	
ditto	50	18¾	98¼	15 14 6	ditto	3	40	114¾	31 11 6
ditto	38	20¾	98	17 17 0	Llywidd	47	6¾	114¾	5 10 6
Santiago	98	25¼	95¼	21 16 0	ditto	6	5¼	129	4 7 0
ditto	73	16¾	99¼	13 17 6	Laxey	38	3¼	129¼	2 5 6

TOTAL PRODUCE.

Cobre	497	£8552 16 3	Lackamore	72	£784 16 0
Knockmahon	481	4121 1 6	Tigrony	51	131 2 6
Chili	283	4921 13 6	Cronebane	25	55 12 6
Santiago	171	3149 5 6	Connorree	51	212 14 6
Copiapo	148	2976 4 0	Llwyidd	53	284 12 0
Cosheen	126	1164 2 0	Laxey	38	86 9 0
Allihies	214	1952 19 0			

Total tons, 2210.—Total amount, £28,[illegible] 8s. 6d.

Copper ores for sale October 21.—Knockmahon 95, ditto 98, ditto 87, ditto 91, ditto 68, ditto 64, ditto 41, ditto 19—Cobre 105, ditto 100, ditto 50, ditto 90, ditto 76, ditto 70, ditto 26—Allihies 108, ditto 98, ditto 72—Chili 76, ditto 90, ditto 91, ditto 5, ditto 86, ditto 23—Cuba 82, ditto 62—Laxey 48—Llwyndu 32, ditto 16—Connorree (precipitate) 8.—Total, 1809.

Copper ores for sale October 28.—Cobre 116, ditto 98, ditto 89, ditto 44, ditto 100, ditto 96, ditto 91, ditto 76, ditto 63, ditto 61, ditto 37—Chili 40, ditto 13, ditto 31, ditto 9.—Total, 953.

SALE OF COPPE ORES AT REDRUTH.

Sampled Sept. 23, and sold at Andrew's Hotel, Redruth, Oct. 8.

Mines	Tons	Price £ s. d.	Purchasers	Mines	Tons	Price £ s. d.	Purchasers
Carn Brea	114	6 12 6	Vivians.	Wh. Virgin	27	3 1 6	P. Grenfells.
ditto	94	6 4 0	—	ditto	28	7 19 6	Vigurs & Co.
ditto	88	6 1 0	Williams.	Trewavas	91	8 0 0	Nevill & Co
ditto	86	6 7 6	Vigurs & Co.	ditto	75	3 9 6	Vivians.
ditto	70	11 1 0	Williams.	ditto	47	6 1 0	Nevill & Co
ditto	68	12 16 6	Vivians.	Tincroft	60	4 10 6	Freemans.
ditto	67	8 1 0	—	ditto	51	5 5 0	Williams.
ditto	64	8 2 6	English Co.	ditto	40	7 17 6	—
ditto	54	7 7 0	Vigurs & Co	ditto	20	6 4 0	—
ditto	40	6 2 0	Vivians.	Levant	66	6 19 0	Freemans.
ditto	35	4 17 0	Vigurs & Co.	ditto	52	12 17 6	—
ditto	11	16 2 0	—	ditto	45	26 15 6	Williams.
W. Prosper	74	3 12 6	Vivians.	ditto	18	6 14 6	Vigurs & Co.
ditto	73	9 3 6	Williams.	Unity W.	60	8 8 6	Mines Royal
ditto	64	9 3 6	Mines Royal	ditto	65	5 16 0	Vigurs & Co.
Friendship	101	4 12 6	Williams.	ditto	6	2 4 6	—
ditto	51	6 17 6	—	W. Provid.	64	6 1 6	Freemans.
ditto	32	2 11 6	Vivians.	ditto	22	15 17 6	Mines Royal
Darlington	121	8 2 6	Williams.	Par Consols	40	8 10 6	Vivians.
ditto	111	8 13 0	—	ditto	35	11 0 6	—
ditto	105	4 18 0	—	Wh. Speed	74	5 7 6	—
ditto	40	2 9 0	—	Wh. Julia	60	6 1 6	Freemans.
Fowey C.	112	6 7 6	Nevill & Co.	Wh. Mosser	47	7 14 6	—
ditto	111	6 7 6	Williams.	Botallack	44	15 11 0	—
ditto	86	6 7 6	Vivians.	Tregothnan Cons.	37	7 1 0	Williams.
ditto	24	17 3 0	Williams.	Cudlip's ore	35	9 11 6	Mines Royal
Wh. Virgin	196	6 17 6	F. Grenfells.	Wh. Kitty	20	7 6 6	Williams.
ditto	78	3 16 6	—				

TOTAL PRODUCE.

Carn Brea Mines	793	£5796 16 0	Wh. Providence	86	£746 9 0
Wh. Prosper, Wh. Friendship	395	3489 17 6	Par Consols	75	706 17 6
Wh. Darlington	376	3585 17 6	Wheal Speed	74	396 10 0
Fowey Consols	333	2361 9 6	Wh. Julia	60	413 3 0
Wh. Virgin	202	1639 13 0	Wheal Mosser	47	317 11 6
Wh. Trewavas	213	1279 19 6	Botallack	44	684 4 0
Tincroft	187	747 13 6	Tregothnan Cons.	37	260 17 0
Levant	180	2454 3 6	Cudlip's ore	35	335 7 6
Wh. Unity Wood	141	900 14 0	Wheal Kitty	20	146 10 0

Average standard, 114*l.* 7*s.*—Average produce, 6¾.—Average price, 7*l.* 1*s.* 6*d.*—Quantity of ore, 2846 tons.—Quantity of fine copper, 191 tons 6 cwt.—Amount of money, 24,124*l.* 0*s.* 6*d.*—Average standard of last sale, 120*l.* 10*s.*—Average Produce, 6¾.

NO SALE on Thursday next, October 15.

Copper ore for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Tresavean, 344; Trethellan, 272; Fowey Consols, 360; Dudfield Mines, 200; Holmbush, 212; Wheal Lydia and South Towan, 200; Wheal Gorland, 74; Higgins's Ore, 34; North Downs, 44; East Crinnis, 35; Trevaud, 29.—Total, 2214.

MINES OF IRELAND.

LEAD ORES, the produce of Irish Mines, sold at Holywell, on the 29th Sept.:—

Mines.	21 cwts.	Price.	Amount.
Ballyhiland and Caime	75	£10 15 6	£806 2 6
Derrynoos	73	9 17 3	720 0 0
Lisburn	51	12 7 9	630 5 6
Wicklow	32	10 17 6	348 0 0
	231		£2505 8 0

PURCHASES OF COPPER ORES AT SWANSEA,

September 29.

Purchasers.	Mines.	Tons	Total	Price. £ s. d.	Amount. £ s. d.	Total Amount. £ s. d.
1. English Copper Co.	Llandidno	..		4 9 6	....	
			43			192 8 6
2. Freeman and Co.	Ballymurtagh	..		2 8 0	....	
			33			79 4 0
3. Grenfell and Sons.	Chili	3		13 1 6	40 4 6	
—	....	29½		19 14 6	581 17 0	
—	....	38		17 6 6	658 7 0	
—	....	3		60 18 6	182 15 6	
—	Santiago	45½		20 12 0	937 6 0	
—	Allihies	69		9 10 6	657 4 6	
—	Knockmahon	58		11 1 6	642 7 0	
—	Chili	46		21 13 6	997 1 0	
—	Tigrony	37		3 5 6	121 3 6	
			329			4823 6 0
4. Sims, Williams, Nevill, and Co.	Ballymurtagh	46		2 14 6	125 7 0	
—	Chili	52		21 10 0	1118 0 0	
—	Llandidno	24		12 1 0	289 4 0	
			123			1532 11 0
5. Vivian and Sons.	Cobre	130		13 7 0	1738 10 0	
—	....	105		13 6 0	1396 10 0	
—	....	95		13 3 6	1249 5 0	
—	Santiago	95		14 7 0	1363 5 0	
			425			5741 10 0
6. Williams, Foster & Co.	Cobre	90		21 11 6	1941 15 0	
—	....	80		21 5 6	1702 0 0	
—	....	62		21 1 6	1306 13 0	
—	....	50		20 5 6	1013 15 0	
—	....	45		13 11 6	593 14 6	
—	....	40		20 5 6	811 0 0	
—	Chili	87		16 11 0	1439 17 0	
—	....	64		16 1 0	1027 4 0	
—	....	55		17 18 0	984 10 0	
—	....	33		61 6 0	2022 18 0	
—	....	30		62 4 0	1866 0 0	
—	Santiago	99		14 4 0	1405 16 0	
—	....	47½		14 4 0	674 10 0	
—	....	45½		21 12 0	982 4 0	
—	Allihies	116		10 2 6	1174 10 0	
—	Knockmahon	80		8 13 0	717 10 0	
			1025			19909 7 0
7. Vigurs and Co.	Cobre	100		13 5 0	1325 0 0	
—	Chili	60		17 3 0	1029 0 0	
—	....	39½		19 14 6	561 17 9	
—	Santiago	47½		14 4 0	674 10 0	
—	Tigrony	21		5 10 6	116 0 6	
			258			3726 8 3
			2235			35747 16 0

FROM THE LONDON GAZETTE,

Tuesday, October 6.

INSOLVENT.

Oct. 6.—J. Simmonds, Bear-yard, Lincoln's Inn-fields, carpenter.

BANKRUPTS.

J. Wightman, Old Jewry, woollen printer. [Reed and Shaw, Friday-street.
J. Denew, Charles-street, Berkeley-square, auctioneer. [Goddard, King-st., Cheapside.
W. H. Osland, Noble-street, city, commission agent. [Ashurst, Cheapside.
W. Cato, Hexham, Northumberland, tea dealer. [Leadbitter, Staple Inn.
J. Chapman, Birmingham, publican. [Chaplin, Gray's Inn-square.
J. H. Pollock, P. Thomson, and J. D. Whitaker, Manchester, merchants. [Walker, Furnival's Inn.
J. Perratt, Yeovil, Somersetshire, wine merchant. [Knox, Hart-street, Bloomsbury.
J. Knowles, Stalybridge, Lancashire, cooper. [Clark & Metcalf, Lincoln's Inn-fields.
E. Browne, Norwich, timber merchant. [Bridges and Mason, Red Lion-square.
B. Harris, Framingfield, Suffolk, cattle dealer. [Francis and Son, Monument-yard.
E. Wood, Nottingham, ironmerchant. [Clowes and Wedlake, King's-bench-walk, Temple.
T. Hicken, Kidderminster, coach maker. [Vincent and Sherwood, King's-bench-walk, Temple.

DIVIDENDS.

Oct. 27, W. Manning, F. Manning, and J. L. Anderdon, New Bank-buildings, city, West India merchants—29, W. Weisford, Tower-hill, merchant—28, C. Humphreys, Bear-lane, Southwark, timber merchant—Dec. 7, J. S. Janion, Kingsley, Cheshire, maltster—Oct. 29, W. Hand, Endon, Staffordshire, tanner—W. Bailey, Sunderland near the Sea, merchant tailor—Nov. 4, J. Ackerman, Bruton, Somersetshire, draper—3, J. Bradbury, Edgbaston, Warwickshire, druggist—7, J. Busby and W. Howdey, Leeds, coach lace manufacturers—Oct. 29, J. D. Williams, Carmarthen, ironmonger—30, J. O. Evans, Liverpool, draper—Nov. 9, J. Mitchell, Portsmouth, draper—2, J. Dobson, York, woollendraper—W. Smith, Upton St. Leonard's, Gloucestershire, miller—Oct. 30, N. Russell, Northallerton, Yorkshire, flaxdresser—8, E. Jones, Bristol, alkali dealer—30, H. Cobb, Graveney, Kent, farmer—28, T. Biethyn, Bristol, woollendraper.

Certificates to be granted, unless cause be shown to the contrary, on or before October 27.

C. A. Tate, Liverpool, tea dealer—T. J. Barry, Mortimer-street, upholsterer—J. Reid, Liverpool, merchant—T. Stanley, Leeds, cloth merchant—R. Kew, Norwich, jeweller—R. H. Evans, Pall-mall, bookseller—J. Hugill, Whitby, Yorkshire, spirit merchant—T. Biethyn, Bristol, woollendraper—J. Eadie, Liverpool, wine merchant.

Friday, October 9.

BANKRUPTS.

M. Cloke, Hastings, Sussex, draper. [Ashurst, Cheapside.
J. Sandell, Ramsgate, boarding house keeper. [Newton and Evans, Great Carter-lane, Doctors'-commons.
J. Moore, Old Bond-street, hatter. [Walker, Southampton street, Bloomsbury.
T. and E. Taylor, Rawmarsh, Yorkshire, earthenware manufacturers. [Taylor, John-street, Bedford-row.
J. Rollason, Aston, near Birmingham, roller of metals. [Stafford, Buckingham-st.
R. Light, Hanley, Staffordshire, grocer. [James and Graham, Old Jewry.
J. Cockcroft, sen., and A. Fletcher, jun., Manchester, stuff merchants. [Johnson, Son, and Weatherall, Temple. [Lincoln's Inn.
C. Ewbank, Liverpool, commission agent. [Meredith and Reeve, New-square,
W. Worsley, Manchester, flour dealer. [Bower and Back, Chancery-lane.
J. Mac Nab Ballenden, Sedgley, Staffordshire, surgeon. [Philpot and Son, Southampton-street, Bloomsbury.
T. J. Faulkner, Manchester, builder. [Clarke and Medcalf, Lincoln's Inn-fields.
W. L. Oddie, Clithero, Lancashire, cotton spinner. [Douglass and Cragg, Verulam-buildings, Gray's Inn.
J. and W. Wooton, Birmingham, refiners. [Chaplin, Gray's Inn-square.
B. Hogg, Armley, Yorkshire, maltster. [Smithson and Milton, Southampton-bldgs.
J. Ackroyd, Batley, Yorkshire, wheelwright. [Battye and Co., Chancery-lane.
J. Weight, Chipping Sodbury, Gloucestershire, victualler. [Pinniger and Co., Gray's Inn-square.
G. Owen, Ffail Uchaf, Carnarvonshire, maltster. [Williams, Hatton-garden.

DIVIDENDS.

Oct 30, W. Hallett and J. Hardie, Queen-street, druggists—Nov. 24, P. Playfair, Warwick, innkeeper—7, T. Bailey, T. Bailey, and J. Bailey, Batley Carr, Yorkshire, woollen manufacturers—4, G. Lumley and W. Brown, Knaresborough, flax spinners—2, S. Beeney, Birmingham, draper—2, D. Meadows, Gloucester, dealer in fruit—Oct. 31, J. Lord and J. Bennett, Batley Carr, Yorkshire, millwrights—Nov. 2, J. Bradshaw, Sheffield, table knife cutler—6, C. Baker, Southampton, timber merchant—S. Bailies, Merthyr Tydvil, Glamorganshire, draper—Oct 31, B. Cowper, Oldham, cotton spinner—Nov. 6, T. W. Gibbs, Bristol, soap maker.

Certificates to be granted, unless cause be shown to the contrary, on or before Oct. 30.

R. A. Phelps, Pancras-lane, Cheapside, ink manufacturer—M. M. Joseph, Liverpool, merchant—C. M. Banks, Handsworth, Staffordshire, plumber.

COAL MARKET, LONDON.

MONDAY.

Price of coals per ton at the close of the market.—Adair's 19—Holywell Main 19—Lease's Main 16 6—Russell's High Main 19 3—Wylam 19 6—Wall's End Bell and Browns 21 3—Bewicke and Co. 22 3—Brown's 21—Gosforth 22 6—Hilda 21 9—Hotspur 20 9—Killingworth 22—Belmont 23 3—Bradyll's Hetton 23—Hetton 24—Hedley 21 6—Lambton 24—Pemberton 22—Stewart's 24 3—Clarence Hartlepool 24—Hartlepool 24—Kelloe 23 6—Adelaide 27 3—Barrington Tees 21 6—Richardson's Tees 21—South Durham 22—Tees 23 6—Forsdell Splint 17—Howard's Netherton Main 17.—Arrived since last sale, 200.

WEDNESDAY.

Adair's 17 9—Chester 18 9—Carr's Hartley 19—Holywell Main 19—Tanfield Moor 16—Wylam 19 6—Wall's End Bewicke and Co. 22 9—Clennell 19 3—Hilda 21 9—Killingworth 22—Riddell's 22 6—Westgate 19 9—Bradyll's Hetton 24—Haswell 24 3—Hetton 24 3—Lambton 24 3—Stewart's 24 6—Hartlepool 24 3—Kelloe 24—Tennant's Hartlepool 24—West Hartlepool 21 9—Brown's Dunarey 22—Clarence Hetton 20 6—Cornforth 21 6—Evenwood 21 3—Richardson's Tees 21 3—Tees 23 9—Tees Hetton 20—West Tees 20—Anthracite 25—Cowpen 16—[illegible] Main 19 9—Arrived since last sale, 12.

FRIDAY.

Adair's 17 6—Bell, Robson, and Co.'s Hartley 17 6—Chester 18 [illegible] 19—Lease's Main 17—Original Windsor' Pontop 18 3—[illegible] High Main 18 6—Tanfield Moor 21 6—Tanfield Moor [illegible] —Clennell 19—Heaton 23 9—Killingworth 22—Bradyll's [illegible] —Hetton 24 3—Lambton 24 3—Stewart's 24 3—Hartlepool [illegible] Hartlepool 24 9—Adelaide 26—Crowdon 20—Evenwood 21 6—[illegible] Seymour Tees 22 6—Stobart Tees 21—Tees 23 9—Anthracite [illegible] ton Main 17—Elgin 18.—Ships arrived, 3.

PRICES OF STOCKS.

ENGLISH PUBLIC FUNDS

	Saturday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Bank Stock, 7 per Cent.	....	....	....	....	....	....
3 per Cent. Red. Anns.	....	....	86¾ ⅞	....	85¾	....
3 per Cent. Consols	87⅛ 6¾	86⅞ 7⅛	87⅛ ⅞	87⅛ 6¾	86⅞ 6⅞	86¾ ⅞
3½ per Cent. Anns. 1818.	....	....	....	....	....	....
3 per Cent. Anns. 1726.	....	....	....	....	....	....
3½ per Cent. Red. Anns.	....	96⅞	96⅛ ⅞	97⅛	94½ ⅞	....
New 3½ per Cent. Anns.	96⅞ 6	96⅛ ⅞	96⅛ ⅞	96⅛ 5¾	95⅞ 6	95⅞ 6⅛*
New 5 per Cent.	....	....	....	....	....	....
Long Anns. 1860.	....	....	....	12⅞	12⅞	12⅞ ⅞
Anns. for 30 Years 1859.	....	....	....	....	....	....
Ditto 1860.	13⅛	12⅞ 13	13	13⅛	12⅞ 13	13
India Stock, 10½ per Cent.	....	....	....	245	....	244½
South Sea Stock, 3½ per Cent.	....	....	....	....	....	....
Ditto Old Ann. 3 per Cent.	....	....	....	....	....	....
Ditto New Ann. 3 per Cent.	....	....	....	....	85⅛	....
3 per Cent. Anns. 1751	....	....	....	....	....	....
India Bonds, 3 per Cent.	3 6 dis	....	12 15 dis	15 dis	18 15 dis	15 16 dis
Exchequer Bills, £1000. 2¼d	6 8 pm	2 4 pm	4 1 pm	1 3pm	1 p par	1 2pm
Ditto £500.	7 8	2 5	4 1	1 3	1 p par	2d 2pm
Ditto Small	7 9	7 3	5 3	1 3	1 p pm	1d 2pm
Ditto Advertised.	....	....	....	....	....	....
3 p. Cent. Cons. for Act. Oct. 14	87⅛ 6¾	87⅛ 7⅛	86⅞ 7⅛	87⅛ 6¾	86⅞ ⅞	86⅞ ⅞
Bank Stock for Op. Oct. 16	....	166½	167½ 6½	....	166	....
India Stock for Ac. Oct. 15	....	....	....	....	....	....

BANK OF ENGLAND.—TRANSFER BOOKS.

	SHUT.	OPEN.
Bank Stock	Thursday, Sept. 3, 1840.	Friday, Oct. 16.
3 per Cent. Reduced	Wednesday ,, 2	Wednesday ,, 21.
3½ per Cent., 1818	Tuesday ,, 1	Tuesday ,, 27.
3½ per Cent. Reduced	Friday ,, 4	Friday ,, 16.
Long Annuities	Saturday, Aug. 29	Saturday ,, 24.
Ditto for Terms of years	Tuesday, Sept. 8	Saturday ,, 17.
Old South Sea Stock	Friday ,, 4	Friday ,, 16.

FOREIGN STOCKS.

	Saturday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Austrian, 5 per Cent.	....	....	106½	....	....	....
Belgian, 5 per Cent.	97½	97 5½	....	....	....	....
Brazilian	74½ ½	74	....	....	....	....
Ditto, 1839	....	....	....	....	....	....
Buenos Ayres, 6 per Cent.	....	14	....	....	....	....
Cuba, 6 per Cent.	....	....	....	....	....	....
Chilian, 6 per Cent.	....	....	....	....	41½	....
Colombian, 6 per Cent.	....	....	....	....	....	....
Ditto, 1824, ditto	22½ 1⅞	21½ 2½	22	22	21½ ⅞	22
Danish, 3 per Cent.	....	....	....	....	73	74 3
Mexican, 5 per Cent.	....	....	....	....	....	....
Ditto, deferred do.	....	....	....	....	....	....
Ditto, 1825, 6 per Cent.	....	....	25	....	....	....
Ditto, def. do. 6 per Cent.	....	....	....	....	....	....
Ditto 5 p. Ct. Consol., 1837	....	....	....	....	25¼ 5½	....
Ditto Deferred	7½ 6⅞	....	7½	....	....	....
Neapolitan, 5 per Cent, 1824	....	....	....	....	....	....
Peruvian, 6 per Cent.	....	....	....	....	....	....
Portuguese, 5 per Cent.	....	....	....	....	66½	....
Ditto, New 5 per Cent.	32¼ 1½	31⅛ 2⅞	32⅞ ⅞	32⅛	31¼ 2	32½
Ditto, 1837, 5 per Cent.	....	....	....	....	30½	....
Ditto, 3 per Cent.	21¼ 20⅞	21½	21½	21½	21⅞ 2½	22½ ½
Russian, 1822, 5 per Cent.	110½ 10	109⅞ 9½	....	....	109½	....
Spanish, 5 per Cent. Consols	22½ 1⅞	22⅞ 2	22½ ½	22	21⅞ 2½	22½ ½
Ditto, passive	....	....	....	5½	....	....
Ditto, deferred	....	10⅞ ½	10½	11⅛ 10⅞	10⅞ ⅞	11
Dutch, 2½ per Cent.	50	49	49⅞	49 8⅞	47⅞ 8½	49 8⅞
Ditto, 5 per Cent.	95	95½ 4⅞	94½ 5½	95½ 4	95½ ⅞	....
Ditto, 5 New, 1837	....	95½ ½	96⅞ 1½	....	96½	....

FRENCH FUNDS.

	PARIS. Oct. 1	Oct. 3	Oct. 5	Oct. 6	Oct. 7	LONDON. Oct. 8	Oct. 9
5 per Cent. Ann.	104f. 10c.	102f. 10c.	102f.	100f. 50c.	101f. 80c.	95f. 100f.	100f. 75c.
Ex. on Lond. 1 mth.	25f. 24c.	25f. 0c.	25f. 0c.	25f. 0c.	24f. 95c.	25f. 40c.	25f. 40c.
ditto 3 mhs.	24f. 82½c.	24f. 80c.	24f. 80c.	24f. 80c.	24f. 75c.	....	....
4½ per Cent. Ann. Exchange	100f.	97f.	97f.	96f. 50c.	96f. 50c.	....	....
4 per Cent. Ann. Exchange	95f.	92f.	92f.	91f. 50c.	91f. 50c.	....	....
3 per cent. Exchange	71f.	68f.	67f. 68f.	65f. 25c.	66f. 85c.	....	68f. 0c. 25f. 40c.
Bank Shares	2780f.	2650f.	2650f.	2670f.	....	....	....

IRISH FUNDS,
Oct. 8, 1840.

Bank Stock		171	Royal Canal Stock			—
Government Debentures	3½ per ct.	98½	Patriotic Insurance	10	0 0	7½
Ditto Stock	3½ per ct.	95½	Provin. Bank of Ireland	25	0 0	45
Ditto New	3½ per ct.	95½	Hibernian Bank	25	0 7	25
Ditto ditto, reduced	4 per ct.	—	Grand Canal Stock			—
Consols	3 per ct.	85½	Mining Co. of Ireland	7	0 0	15
City Debentures	4 per ct.	57½	City of Dublin Steam Co.	100	0 0	116
Exchequer Bills	2d per diem par.		Kingstown Railway	100	0 0	75

AMERICAN FUNDS.

Redeemable	London	America	Redeemable	London	America
New York 5 1855	87	—	Louisiana 5 1844, 7, 50, 2	87	—
.. 1858	—	—	Missisipi 6 1861, 6, 71	—	—
.. 1860	—	93	INCORPORATED BANKS. Per Cent.		
Pennsylva. 5 1854	81½	—	United States 8 1866	14½	63¼ 4
.. 1856	—	—			
.. 1858	82½ 3½	90	Louisiana State 10 1870	—	—
.. 1860, 62	—	—	Bank of Louisiana 8 1870	—	—
.. 1864	83½	—	N. Orleans, Canal & B. Co.	—	—
Maryland 5 1889	82	90	City Bank	—	—
Ohio 6 1856, 60	90 91	—	New York Life and Trust 5	—	—
South Carolina 5 1866	—	—	Tenessee Planters 9	—	—
Tennessee 6 1869	83 4	—	Mississippi 10	—	—
Virginia 6 1857	86	—	Exchange at New York	—	106½

COURSE OF EXCHANGE.
FRIDAY, Oct. 9, 1840.

	Prices quoted	Prices negotiated on 'Change			Prices quoted	Prices negotiated on 'Change	
Amsterdam	12 4½	12 1½	12 1⅞	Barcelona	36½	—	—
Ditto at Sight	12 1½	11 19	11 19½	Seville	36½	—	—
Rotterdam	12 5	12 1⅞	—	Gibraltar p. h. d.	48	—	—
Antwerp	12 4	12 1	—	Leghorn	30 20	30 5	30 10
Hamburgh Mcs. B.	13 10	13 6⅞	13 7	Genoa	25 65	25 50	25 52½
Altona	13 10½	—	—	Milan	31	—	—
Paris, 3 days' sight	25 25	25 5	25 10	Venice p. 6 A. L.	47	—	—
Ditto	25 50	25 32½	25 35	Naples	40½	41	41½
Marseilles	25 55	25 42½	25 45	Palermo	122½ oz	123	—
Bordeaux	25 60	—	—	Messina	122½	123	122½
Frankfort on Main	140	148½	148½	Lisbon	52½	53	—
Petersburg p. ruble	37½	—	—	Oporto	52½	53½	—
Berlin cur. doll.	7	—	—	Rio Janeiro	29	28½	29
Vienna eff. fl.	10 1	9 57	9 58	Bahia	27	—	—
Trieste ditto	10 3	9 59	10 0	Buenos Ayres	—	—	—
Madrid	36½	36⅞	—	Madras	—	—	—
Cadiz	36½	36⅞	36⅞	New York	46½	—	—
Bilboa	36½	—	—	Philadelphia	48	—	—

GOLD AND SILVER.

Foreign Gold in Bars (standard) per oz.	£3	17	10½
Foreign Gold in Coin, Spanish Doubloons	0	0	0
" " 20 Franc pieces	0	0	0
New Dollars	0	4	11
Silver in Bars (standard)	0	5	0¼

METEOROLOGICAL JOURNAL, 1840.

October	Thermometer	Barometer	October	Thermometer	Barometer
Thursd. 1	from 51 to 55	29,87 to 30,00	Monday 5	44 .. 55	30,00 .. 30,04
Friday 2	47 .. 58	30,06 .. 30,11	Tuesday 6	52 .. 55	30,04 .. 30,03
Saturd. 3	37 .. 57	30,10 .. 30,03	Wednes. 7	53 .. 55	30,01 .. 30,06
Sunday 4	45 .. 56	29,89 .. 30,01			

Wind, S.W. on the 1st, N. on the 2d and three following days, N.W. on the 6th, and W. on the 7th.

On the 1st and morning of the 2d, cloudy; afternoon of the 2d and following day, generally clear; a few drops of rain on the evening of the 3d; the 4th, generally clear, rain at times; the 5th, morning cloudy, with rain, otherwise clear; the 6th and following day, generally clear.

Rain fallen ,04 of an inch.

Edmonton. CHARLES HENRY ADAMS.

TIDE TABLE.
HIGH WATER AT LONDON BRIDGE, for the week ending October 16.

	Satur.	Sunday.	Mond.	Tuesd.	Weds.	Thurs.	Friday
Morning	1 8	1 41	2 11	2 40	3 29	4 14	4 59
Afternoon	1 22	2 6	2 32	3 9	3 51	4 36	5 24

PRICES OF SHARES.

BRITISH MINES.

No. of Shares.	NAME OF COMPANY.	Amount of Share	Amount paid	Highest Price	Lowest Price	Present Price
500	Anglesey	100	5	10	8	8 10
1,800	Arigna Iron & Coal Co.	50	34	9½	9½	9½
4,000	Bissoe Bridge	5	5	2	1½	2
8,000	Blaenavon	50	45	40	40	40
20,000	British Iron	100	50	..	..	—
512	Beam	..	8	10	10	10
100	Copper Bottom	..	41	30	30	30
2,000	Cornubian Lead Co.	..	3½	1½	1	1
6,000	Cornwall Great United	12	10½	1½	1	1½
1,000	Cuddra	10	10	7	6	6
5,800	Dartmoor Consols	5	5	1	1	1
10,000	Durham County Coal Co.	50	37	..	..	—
2,000	Danescombe	..	..	..	..	—
2,000	De Dunstanville	..	..	..	..	—
1,000	Duffield	.	30	8½	8	8
2,000	East Cornwall Tin, &c.	6	6	2	2	2
1,200	East Mulberry Hills	3½	3½	1	1	1
4,000	English	25	12½	1	1	1
3,200	Great Wh. Prosper	25	7½	6½	6½	6½
4,000	Great Wh. Charlotte	3	3	1½	1½	1½ ½
2,000	Gernick	..	..	½	½	½
1,000	Harrowbarrow	..	..	..	..	—
10,000	Hibernian	50	12½	4	3½	3½ ½
1,000	Holmbush	100	4	43	41	42
2,000	Isle of Serk (Guernsey)	..	9	11½	11½	11½
660	Llwyndyissa	..	5	..	..	—
20,000	Mining Co. of Ireland	25	7	15½	15	15
6,000	Perran Consols	4½	4½	1	1	1
6,000	Polbreen	5	4	1	1	1
2,000	Relistian	..	..	4½	4	4 ½
5,000	Redmoor Consolidated	5	5	1½	1½	1½
10,000	Rhymney Iron	50	50	40	40	40
800	South Towan	10	10	1½	1	1½
Pro. 3,600	Talacre	50	5	5½	5½	5½
Con. 2,000	Talacre	6	1	5½	5½	5½
4,000	Tregollan	5	4	⅞	⅞	⅞
4,600	Treleigh Consols	5	4½	1½	1½	1½
4,505	Tamar Consols	5	3	2	1½	1½ 2
6,000	Tin Croft	10	6½	3⅞	3½	3½
198	Trevaskus	..	60	45	45	45
4,300	Tretoil	.	1½	3⅞	3½	3½ ½
4,000	United Hills	5	5	6½	6	6½ ½
3,300	West Cork	50	50	..	..	—
5,000	Wh. Harm. & Montague	10	10	½	½	½
6,000	Wicklow Copper	5	5	8	8	8
3,820	West Wheal Jewel	8	8	4½	4½	4½ ½
5,000	Wheal Sisters	..	4	½	½	½
1,000	Wheal Julia	..	..	20	20	20
3,300	Wheal Leeds	2½	..	..	..	—

FOREIGN MINES.

No. of Shares.	NAME OF COMPANY.	Amount of Share	Amount paid	Highest Price	Lowest Price	Present Price
5,000	Alten Mining Company	15	12½	10½	10½	10½
10,000	Anglo Mexican Co.	100	100	1½	1½	1½
3,374	Do. Subscription	25	25	1½	1½	1½
2,000	Bolanos	150	150	35	35	35
	Ditto Scrip	..	25	20½	20	20
10,000	Brazilian Imperial	35	20	14	14	14
10,000	Bolivar	20	20	⅞	⅞	⅞
10,000	Ditto Scrip	10	10	2	2	2
10,000	Cata Branca } Brazilian	10	6½	9	9	8½
10,000	Conceiçao } Co.	10	4	..	..	—
10,000	Candonga Mining Co.	20	7½	..	..	—
	Ditto registered	20	7½	..	..	—
12,800	Cobre Copper Company	40	40	32	31	31
8,500	Colombian Co. regis.	55	55	3	3	3
1,500	Ditto, New	11	11	..	..	—
10,000	Copiapo Mining Co.	20	13½	9⅞	9⅞	9⅞
20,000	General Mining Association	20	18	6	6	6
5,351	Mexican Company	60	56½	2½	2½	2½
12,000	Mocaubas and Cocaes	25	25	8	8	8
5,000	Minas Geraes	20	12	..	..	—
2,000	New Granada	10	10	..	..	—
14,582	{ Real del Monte, regis.	54½	34½	2	2	2
	{ Do. unregistered	54½	..	3	3	3
	Ditto Loan Notes	150	50	160	160	160
2,500	Rio de Anori	..	3½	..	..	—
7,000	Royal Santiago	65	10	15	14	15
11,000	St. John d'el Rey	20	14½	2⅞	2½	2½
30,000	United Mexican	40	40	4	3	3
	Black Scrip, addl. capital	14	5	4½	4	4
	Red New Scrip	5	5	6½	6½	6½
14,000	Zacatecas Mining Co	5	5	..	..	—

RAILWAYS.

No. of Shares.	NAME OF COMPANY.	Amount of Share	Amount paid	Highest Price	Lowest Price	Present Price
2,500	Aylesbury	20	20	..	..	—
6,300	Birmingham and Derby	100	100	70	70	69½
9,300	Birming. & Gloucester	100	80	76	76	76
7,500	Birm. Brist. & Th. Junc.	20	20	4⅞	4⅞	4⅞
660	Bolton and Leigh	100	100	60	60	60
641	Ditto ¼ Shares	25	25	..	..	—
15,000	Bristol and Exeter	100	50	26½	26	26½
350	Cheltenham	100	100	1½	1½	1½
5,000	Chester & Birkenhead	50	50	50⅞	50⅞	50⅞
	Do. ½ Shares	..	..	15	15	15
5,000	Chester and Crewe	50	45	60½	60½	60½
7,500	Chelten. & Gt. Western	100	55	22	22	22
14,000	Chelt. Oxford and Tring	100	5	6½	6½	6½
2,000	Clarence	100	32	25	25	25
6,000	Dublin and Drogheda	100	15	4	4	4
	Dublin and Kingstown	100	90	80	80	80
8,000	Dublin and Kilkenny	100	7½	..	..	—
800	Durham Junction	100	100	100	100	100
2,040	Durham & Sunderland	50	50	30	30	30
	Danube and Maine	..	..	30	30	30
60,000	Eastern Counties	25	21	11½	10½	10½
5,000	Edinb. Leith & Newha.	20	13	13½	13½	13½
18,000	Edinburgh & Glasgow	50	35	30	29	29
2,500	Forest of Dean	50	50	40	40	40
12,300	Glasg., Paisley & Ayrsh.	50	33	32	33	33
16,000	Glasg., Paisley, & Green.	25	20	19	19	19
10,400	Grand Junction	100	100	212	212	212
	Do. ½ Shares	50	50	113	113	113
	Do. ¼ do.	25	25	60⅞	60⅞	60⅞
10,000	Great North of England	100	65	57	57	57
25,000	Great Western	100	65	85	82	82
25,000	Ditto New	50	40	47	46	46
6,000	Gosport Junction	50	25	32	32	32
8,000	Gt. Leinster & Munster	100	5	1	½	½
8,000	Hull and Selby	50	45	45½	45½	45½
2,000	Hartlepool Dock & Rw.	..	100	140	140	140
5,000	Lancaster & Preston	50	42½	33½	33½	33½
2,100	Leeds and Selby	100	100	33½	33½	33½
2,000	Leicester and Swaning.	50	50	65	65	65
3,100	Liverpool & Manchester	100	100	193	192	193
12,021	Do. New Shares	25	25	43½	43½	43½
7,968	Do. ½ do.	50	50	87½	87½	87½
24,000	Lond. & Blackwall	25	20	17½	17½	17½
	Do. New	..	.	27½	27½	27½
20,000	London and Greenwich	20	20	6⅞	6⅞	6⅞
	Ditto New	..	20	16½	16½	16½
25,000	London and Birmingh.	100	90	168	168	168
25,000	Do. ¼ Shares	25	5	27	26½	26½
	Do. New	32	24	43½	43½	43½
26,618	London & Croydon Tr.	20	14½	11½	10⅞	11
6,334	Do. Scrip	9	9	12½	12½	12½
36,000	London & Sth. Western	50	39½	33½	31½	31½
36,000	London & Brighton	50	35	29½	29	29 ½
	London Grand Junc.	100	10	30½	30½	30½
2,000	Llanelly	100	70	73	73	73
7,000	Manchester & Sheffield	100	30	8	8	8
14,000	Manchester and Chester	..	2½	..	..	—
13,000	Manchester and Leeds	100	70	94	93	94
13,000	Do. (New)	50	25	41	40½	41
10,000	Manchest. South Union	100	5	21⅞	21½	21½
1,000	Manchester & Oldham	100	5	..	..	—
30,000	Manchester & Birming.	70	35	22½	22	22
13,[illegible]	Do. Extension	70	7	4½	4	4½
3,000	Maryport & Carlisle	50	47	7	7	7
10,000	Midland Counties	100	100	85	80½	80½
3,000	Newcastle and Carlisle	100	100	104	104	104
3,000	Ditto New	25	25	28	26	28
12,000	North Midland	100	100	81½	81½	81½
13,000	Ditto (New)	50	40	41	40½	41
12,000	Northern and Eastern	100	30	22	22	22
6,000	North Union	100	75	63½	63½	63½
2,000	Preston and Wyre	50	50	40	40	45
6,000	Ditto (New)	25	15	..	..	—
1,500	Stanhope and Tyne	100	100	..	..	—
1,000	Stockton & Darlington	100	100	173	173	173
1,000	Do. ½ Shares	50	50	..	..	—
3,000	South Durham	50	2½	..	..	—
4,000	Sheffield & Rotherham	25	25	..	..	—
36,000	South Eastern	50	25	6	3	3
3,000	Taff Vale	100	60	55	55	55
3,300	Warrington & Newton	100	100	..	..	—
5,000	Westminster & Greenw.	50	2	½	½	½
1,000	West Durham	10	9½	9	9	9
6,000	York & North Midland	50	50	67	66	67

PRICES OF SHARES.

MISCELLANEOUS.

No. of Shares.	NAME OF COMPANY.	Amount of Share	Amount paid	Highest Price	Lowest Price	Present price
10,000	Anglo Mexican Mint	10	10	10⅞	10⅞	10
10,000	Anti Dry Rot	25	18½	3½	3½	3½
10,000	Asphalte (Claridge)	20	4	1	⅞	2
10,000	Assam Tea	50	12½	12½	12½	12½
10,000	Australian Agricultur.	100	28½	41	40½	41
8,600	Brit. Rock & Patent Salt	50	35	.	..	—
8,000	Bahia Steam	10	7	½	½	½
2,500	Bitumen Basteune, &c.	20	3	1	1	1
6,000	Brit. Americ. Land Co.	50	35½	10	10	10
20,000	Brit. Agricu. Loan Co.	100	5	..	..	—
[illegible],000	Canada Company	100	32½	37	34	34
10,000	Canada (Upper) Bonds		.	86½	86½	86½
	City Bonds, div. 4½	..	..	101	100	100½
5,000	Eastern Coast of Central America [Deb.	20	15½	2½	..	—
5,000	Droitwich Patent Salt	25	25	20	..	—
2,500	Essex Marine Salt	20	8	..	..	—
1,000	Equitable Discount So.	100	20	..	.	—
2,700	Equitable Rever. Soc.	100	55	.	..	—
20,000	General Steam Navig.	15	14	26	26	26½
2,100	Hungerford Market	100	100	31½	31½	31½
	Hudson's Bay Stock	100	100	268	268	268
10,000	Irish Waste Land Co.	50	6	½	½	½
8,000	Lond. Rever. Inter. So.	50	10	8	..	—
1,800	London Corn Exchan.	36	37½	..	25	—
8,000	Lond. Caoutchouc Co.	12½	12½	5	5	5
5000	London Cemetery Co.	20	18	18	18	18
50,000	Mexican South Amer.	10	7	3	2	3
	New Corn Ex.	..	37½	20½	20½	20½
	New Brunswick (Land)	..	60	12	12	12
	Rolling & Com. Iron	25	5	6	6	6
10,000	Rio Doce	25	6	½	½	½
2,754	Rever. Interest Society	100	100	110	120	120
2,633	Ditto New	100	100	117	117	117
15,000	Royal Mail Steam-pk.	100	20	15	15	17½
10,000	South Australian	25	17½	21	21	21
	Ship Ow. Towing Co.	10	7½	6½	6½	6½
4,000	Thames Tunnel	50	50	8	8	8
10,000	Van Dieman's Land	100	18½	12½	12½	12½

CANALS.

No. of Shares.	NAME OF COMPANY.	Amount of Share	Amount Paid.	Price.	Dividend per Ann.	Next Dividend Payable.
1,760	Ashton and Oldham	98	98	113	7	Sept.
1,482	Ashby-de-la-Zouch	113	113	71	4	Oct.
720	Barnsley	160	160	275	14	July
1,260	Basingstoke	100	100	55	5	—
1,005	Brecknock & Abergav.	150	150	92	5½	—
8,000	Birm.ng. 1-16th Share	79⅞	79⅞	203	10	Dec.
4,000	Do. & Liverpool Junct.	100	100	26½	..	—
477	Bolton and Bury	250	250	..	6	Jan.
712	Bridgwater & Taunton	100	100	70	3	Aug.
400	Chelmer & Blackwater	100	100	101	5	Jan.
16,000	Carlisle	..	21½	..	..	
500	Coventry	100	100	860	41	Nov.
1,500	Chesterfield	..	..	..	..	
460	Cromford	100	100	350	27	July
4,546	Croydon	31½	31½	3⅞	..	—
11,810	Do. Bonds	..	..	..	5	Oct.
20,000	Danube and Mayne	41⅞	41⅞	31	4	—
2,060⅞	Dudley	100	100	98	4½	Sept.
600	Derby	100	100	136	13	July
3,575⅞	Ellesmere & Chester	133	133	83	4	Sept.
231	Erewash	100	100	750	62	Oct.
1,297	Forth and Clyde	400	400	650	30	July
11,600	Grand Junction	100	100	130	8	June
2,849½	Grand Union	100	100	26	1½	Oct.
1,500	Grand Surrey	100	100	16	..	Sept.
120,000	Do. (optional) Loan	100	100	63	4	Dec.
3,096	Grand Western	100	100	10	..	—
600	Glamorganshire	172½	172½	..	13½	Sept.
1,960	Gloucester & Berkley	100	100	..	..	
269	Do. (optional) Notes	60	60	..	..	
749	Grantham	150	150	203	12	May
6,238	Huddersfield	57½	57½	26	2	Sept.
100	Kensington	100	100	10	..	—
25,328	Kennet and Avon	40	40	27	1½	Sept.
11,699½	Lancaster	47½	47½	28	1½	Mar.
2,807½	Leeds and Liverpool	100	100	790	30	Nov.
18⅞	Leeds & Liverpl. New	80	..	..	16	—
545	Leicester	140	140	150	15½	July
1,897	Leicester & Northam.	83½	83½	73½	5½	Dec.
350	Lisk. and Looe Un.	25	25	..	..	—
70	Loughborough	142½	142½	2250	180	July
	Manches., Bol. & Bury	..	78	66½	..	—
2,409	Monmouthshire	100	100	202	10	Dec.
700	Montgomeryshire	100	100	..	4½	Aug.
250	Melton Mowbray	100	100	200	10	July
500	Mersey and Irwell	100	100	560	25	Oct.
3,000	Macclesfield	100	100	46	2½	—
247	Neath	100	100	325	17	July
100	Nene Navig. Bds.	100	100	.	..	—
1,786	Oxford	100	100	600	30	Sept.
521	Oakham	130	130	52	2	May
2,400	Peak Forest	78	78	..	4	Dec.
2,520	Portsmouth & Arundel	50	50	..	..	—
21,418	Regent's (or London)	33½	33½	11	..	July
5,669	Rochdale	85	85	95	5	May
500	Shropshire	125	125	138	8	Dec.
800	Somerset Coal	150	150	180	10	Dec.
26,000	Do. Lock Fund Stock	12½	12½	11½	4½	Dec.
700	Stafford. & Worcester	140	140	..	36	July
500	Shrewsbury	125	125	280	16	Nov.
300	Stourbridge	145	145	296	9	July
3,647	Stratford-on-Avon	79½	79½	58	2	Aug.
200	Stroudwater	150	150	500	26	Nov.
533	Swansea	100	100	265	16	Nov.
3,762	Severn & Wye & Railw.	35	35	44	2½	Sept.
1,300	Thames & Severn blk.	100	100	34	3	June
1,150	Do. Do. red.	100	100	30	3	June
2,600½	Trent & Mersey ½ Sh.	50	50	..	32½	Dec.
350	Tavistock (mineral)	100	100	..	2	Mar.
8,149	Thames and Medway	19½	19½	2	..	
3,344	Do. New	.	.	.	..	
1,000	1,000½ Warwick & Bir.	100	100	252	18	May
980	Warwick and Napton	100	100	180	15	Nov.
6,000	Worcester & Birming.	78	78	59	4	Aug.
5,000	Wilts and Berks	67½	67½	29	1½	May
800	Wyrley and Essington	125	125	..	6	Jan.
126	Wisbeach	105	105	30	..	—
903	Wey and Arun	110	110	22½	1	May.

ASSURANCE COMPANIES.

No. of Shares.	NAME OF COMPANY.	Amount of Share	Amount paid	Price	Dividend per Ann.	Next Dividend Payable
2,000	Albion	500	50	75	3½	Dec
50,000	Alliance Brit. & Forei.	100	11	14	6	Oct.
50,000	Do. Marine	100	5	5½	6½	Jan.
24,000	Atlas	50	5	15	½	July
20,000	British Fire	250	50	40	4	Sep.
12,000	British Comercial	50	5	5½	6	Dec.
5,000	Cler. Med. & Gen. Life	100	2½	4½	3	Aug.
4,000	County	100	10	42	3	Dec.
	Crown	50	3	9½	8	Nov.
20,000	Eagle	50	5	5½	½	Oct.
200	Economic Life	1000	250	450	5	Jan.
2,271	European Life	20	20	22	1½	Jan.
50,000	Ditto New	20	2	1½	2s	Jan.
20,000	English & Scotch Law	50	2	2½	..	July
1,000,000	Globe Stock	100	100	121	6	Dec.
20,000	Guardian	100	27½	38½	5	July
7,500	Hercules	100	10	16	7	April
30,000	Hope Life	25	2½	1½	4s	Sep.
30,000	Hope Fire	25	2½	3½	½	Mar.
2,400	Imperial Fire	500	50	135	5	Dec.
7,500	Imperial Life	100	10	10½	½	July
13,450	Indemnity Marine	100	5⅞	21	3	Sept.
2,020	Kent Fire	50	50	68	3½	Feb.
10,000	Law Life	100	10	30	16s	April
50,000	Minerva Life	20	2	..	4	July
3,900	London, Fire	25	12½	19½	½	Sep.
31,000	London, Ship	25	12½	19½	½	Sep.
20,000	Legal & General Life	50	2	3½	..	—
30,000	North British	200	10	20½	8	June
31,000	National Life	100	5	12	6	July
5,000	National Loan Fund	10	2½	3½	..	—
10,000	Nav., Military & E. I.	25	3	3	4	
30,000	Palladium Life	50	2	2½	5	Jan.
30,000	Protector Life	..	1	½	4	—
[illegible],000	Provident Life	100	10	20	1	June
	Phœnix	..	..	186	3	—
100,000	Rock Life	20	2	6⅞	3s	Oct.
689,220	Royal Exchan. Stock	.	.	203	5	Dec.
	Sun	..	..	210	6½	Dec.
5,000	Universal Life	100	5	8	6⅞	May
1,300	Union	200	20	125	3½	July
6,000	University Life	100	5	9	3	—
30,000	United Kingdom Life	20	2	..	4	—
30	Westminster Life	1000	100	..	—	..

PRICES OF SHARES

JOINT STOCK BANKS

No. of Shares.	NAME OF COMPANY.	Amount of Share	Amount paid.	Price.	Dividend per Ann.	Next Dividend Payable
25,000	Agric. & Com. of Irel.	25	10	..	..	—
10,000	Australasia	40	40	61½	8	Jan.
5,000	Ditto (New)	40	40	56½	.	—
10,000	Birmingham Bank	50	10	22	10	Mar.
500,000	British Linen Co.	100	100	..	8	Dec.
20,000	British North Amer.	50	40	37	6	July
100,000	Commercial Engl.	5	5	5½	7	—
	Commercial London	100	100	100	..	—
20,000	Colonial	100	25	37½	7	Jan.
5,000	Devon and Cornwall	100	25	45	8	—
3,000	Equitable Loan Co.	..	9	10	..	—
10,000	Gloucestershire	50	10	20	10	Feb.
6,000	Hampshire	50	5	9	10	Aug.
10,000	Hibernian	100	25	21	4	—
4,000	Ionian State	25	5	5	..	—
30,000	London & Westmins.	100	20	22⅞	6	Mar.
3,000	Lancaster	100	20	..	10	Aug.
25,000	Liverpool	100	12½	21⅞	10	July
60,000	Lond. Joint Stock Co.	50	10	12½	5	July
40,000	London & County	50	10	9	5	Mar.
50,000	Manch. & Liver. Dis.	100	15	11½	7½	—
20,000	Manchester	100	25	27	7	Oct.
25,000	Monm. & Glamorg.	20	10	16	15	Aug.
21,500	Northampsh. Union	25	5	14	14	July
20,000	North & South Wales	20	5	10½	6	—
20,000	Natl. Bank of Ireland	50	17½	15⅞	5	Aug.
10,000	Nat. Provincl. Engl.	100	35	36½	6	Jan.
10,000	Ditto New	20	10	9⅞		—
80,000	Nor. & Cnt. B. of Eng.	10	10	3	5	Dec.
10,000	North Wilts	25	5	10⅞	7	—
20,000	Prov. Bk. of Ireland	100	25	44½	8	July
4,000	Ditto New	10	10	18	8	—
60,000	Union B. of London	50	5	5½	8	—
10,000	Union of Australia	25	20	29	18	July
10,000	Ditto New	25	5	9½	—	—
20,000	W. of Eng. & S.W. Dis	20	12½	12½	5	—
20,000	Wilts and Dorset	15	8½	8½	6	—

GAS LIGHT AND COKE COMPANIES

No. of Shares.	NAME OF COMPANY.	Amount of Share	Amount paid.	Price.	Dividend per Ann.	Next Dividend Payable
10,000	Alliance	10	5	..	7	—
2,500	Bath	20	16	..	½	Sept.
600	Bradford	25	25	.	10	—
5,000	British	40	18	18½	1½	May
5,000	Do. Provincial	20	19	25	1½	Nov.
928	Birmingham	77½	77½	96	5½	July.
2,400	Birm. & Staffordshire	50	50	76½	4	Sept.
600	Brentford	50	50	..	4	April
4,250	Bristol	20	20	19	2	Feb.
2,250	Brighton	20	20	14	3½	Sept.
2,471	Brighton, General	20	20	9½	4½	Nov.
363	Carlisle	25	..	..	..	—
4,000	Continental Consolidat.	50	62½	105	6½	July
7,000	Do. New	50	12	25½	7	—
240	Canterbury	50	50	..	6	Jan.
700	Chelmsford	50	50	42	4	Dec.
300	Cheltenham	50	50	.	8	Oct.
1,000	City of London	100	100	..	10	Sept
1,000	Do. New	100	75	150	10	Dec.
800	Coventry	25	25	2½	..	—
200	Derby	50	50	..	..	—
180	Dover	50	50	..	..	—
600	Dudley	20	20	17	5	—
4,500	Edinburgh Coal Gas	25	25	..	..	—
240	Exeter	50	50	..	..	—
4,000	Equitable	50	50	19	3	June
10,000	European	20	15	11⅞	6	Aug.
4,450	Glasgow	25	25	54	10	—
20,000	Greenwich Railw. Gas	..	1	..	..	—
10,000	Imperial	50	50	57½	5	—
85,000	Do. Bonds	100	100	..	4	—
1,200	Ipswich	..	10	..	..	—
800	Isle of Thanet	25	20	19	5	Aug.
2,350	Independent	30	30	49	6	Oct.
240	Leicester	50	50	..	..	—
750	Leith Coal Gas	20	20	..	..	—
500	Liverpool	242½	242½	375	17	—
	Do. N. Gas and Coke	100	100	97	..	—
	Do. (New Do.)	..	60	..	..	—
200	Maidstone	50	50	100	10	Feb.
9,000	Phœnix	50	39	35½	4	June
579	Portsea	..	53	..	..	—
304	Poplar	50	50	..	..	—
1,000	Ratcliff	100	80	63	5	Sept.
480	Rochdale	..	15	..	..	—
	Reigate	..	11	13½	..	—
4,000	South Metropolitan	50	22	..	4	July
1,600	Sheffield	..	16½	..	..	—
1,000	Shrewsbury	..	10	..	..	—
120	Swansea	50	50	..	..	—
9,000	United General	50	47	33½	5	Oct.
240	Warwick	50	50	50	5	Jan.
400	Wakefield	25	25	229	1½	Jan.
750	Warrington	20	20	20	1	Oct.
12,000	Westminster Chartered	50	50	58	3	Dec.
6,000	Ditto New	50	10	11½	12s	Dec.
200	Worthing	50	50	..	5	Aug.
800	Yarmouth	—	—	—	—	—

DOCKS.

600,1065	Commercial	100	100	65	3	July
	East and West India Stock	100	100	100	5	Jan.
1,038	East Country	100	100	10	..	—
3,238,310l. 5s	10 London.. Stk	..	..	64	3	Dec.
	Ditto Bonds	.	..	100	4	—
2,200	Bristol	147½	147½	75	3½	Oct.
68,324l.	Ditto Notes	..	..	..	5	Nov.
570	Folkestone Harbour	50	50	.	..	—
15,000	Ditto Bonds	..	.	..	5	—
11,000	Grand Collier Docks	50	1	1	..	—
1,352,752	St. Katharine.. Stock	100	100	101	5	Jan.
500,000	Ditto Bonds	..	..	..	4½	Oct.
200,000	Do. Bonds for 10 years	..	..	..	4	Oct.
2,500	Deptford Pier	20	3	11	..	—
7,000	Southampton	50	15	6	..	—

BRIDGES.

1,600	Hammersmith	50	50	22	1	Jan
7,231	Southwark w. new sub.	63½	63½	2⅞	..	—
1,700	Do. New of 7½ per cent.	50	50	13½	1⅞	Dec.
5,848	Vauxhall	70½	70½	25	19s	Dec.
5,000	Waterloo	100	100	3	..	—
5,000	Do. old Annuities of 8l.	60	60	29½	22s	Feb.
5,000	Do. new do. of 7l.	40	40	17⅞	19s 3	Feb.
60,000	Ditto Bonds	..	.	120	5	Feb.

WATER WORKS.

4,800	Birmingham	25	25	27	10s	—
121	Colchester	100	100	..	..	—
4,433	East London	100	100	170	7	Jan.
4,000	Glasgow	50	50	.	.	—
5,500	Grand Junction	41½	46½	66½	2½	Jan.
5,400	Edinburgh Joint Stock	25	25	..	..	—
2,000	Kent	100	100	45	2	Jan.
372	Liverpool Bootle	220	220	326	10	Jan.
1,500	New River Lond. Bridge Water Annuities	..	..	60	2½	Oct.
4,486	Manchester & Salford	100	50	36	2½	Mar.
800	Portsea Island	50	50	..	..	—
700	Portsmouth & Farlington	50	50	21	1	—
8,000	Ramsgate	10	8	10	.	—
1,000	Vauxhall, late So. Lond.	100	100	101	5	Oct.
9,300	West Middlesex	63½	63½	101	4½	Dec.
1,360	York Building Co. L. P.	100	100	35	1/14	Oct.

ROADS.

[illegible]	Archw. and Kent Tn.	30	30	..	1	1 & 7
[illegible]	Barking	100	100	22½	1½	1 & 7
1,000	Commercial	100	100	73	3	1 & 7
2,000	Do. East India Dock Br.	100	100	5	3	1 & 7
492	Great Dover Str.	..	70	..	1½	1 & 7
2,380	Highgate Archway	..	300	2	1½	—
11,000	New North Rd. Stock	100	100	.	.	—

LITERARY INSTITUTIONS.

400	Adelaide Gal. of Science	10	..	.	.	—
1,000	London, w. Bronze Tick.	75	73	16½	.	—
1,500	London University	100	100	8	..	—
700	Russell	25	25	7	.	—
2,100	King's College	100	100	19½	..	—

LONDON: Printed and Published by HENRY ENGLISH, the Proprietor, at his Office, No. 37, New Broad-street, in the city of London; where all Communications and Advertisements are requested to be forwarded, post paid.—Saturday, October 10, 1840.